



Cossacks

- *European Wars*

Manual

Should you experience a technical problem concerning the operation of this product, please contact our technical support staff. Also, check out the Support page on our web site listed below:

e-mail: support@cdv.de

Official web site: www.cossacks.com

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An aerial, grayscale photograph of a city, likely St. Petersburg, Russia, showing a complex network of canals and bridges. The image is slightly faded and has a textured, aged appearance. The city is viewed from a high angle, showing the layout of the waterways and the surrounding urban area.

Cossacks

European Wars

1. GETTING STARTED

1.1.1 SYSTEM REQUIREMENTS

Minimum system requirements: Pentium 200, 32MB of RAM, 1MB DirectX compatible video card, double speed CD-ROM drive, DirectX compatible sound card, mouse. This configuration will allow the game to run satisfactorily with a resolution of 800x600 (to launch the game your monitor must support 1024x768) and a small number of units.

Recommended system requirements: Pentium II 350, 64MB of RAM, 4MB DirectX compatible video card, 10 speed CD-ROM drive, DirectX compatible sound card, mouse. This configuration will allow the game to run satisfactorily in high resolutions with a large number of units.

1.1.2 OPERATING SYSTEM

You must be running Windows 95, Windows 98, Windows 2000 or Windows NT 4.0 with Service Pack 4 in order to play Cossacks.

1.1.3 VIDEO

An SVGA monitor and DirectX compatible video card with 1MB of memory are required to play the game. We recommend that you install the latest driver versions for your video card. The game does not require a 3D acceleration.

Note:

Your monitor must support a 1024x768 resolution for the game to run. If your monitor supports only resolutions lower than 1024x768, Cossacks will not run.

Note:

You must have an installed version of DirectX 6.0 or higher on your computer for the game to run. If you do not already have DirectX installed, you can install it from the game CD.

1.1.4 AUDIO

This game requires any DirectX compatible sound card to run. We recommend installing the latest driver versions for your sound card.

Note:

When testing we discovered that old sound cards in ISA slots and sound cards with Yamaha XG chipsets with old drivers lead to computer problems. This problem can only be eliminated by installing the latest drivers for these video cards.

Note:

You must have an installed version of DirectX 6.0 or higher on your computer for the game to run. If you do not already have DirectX installed, you can install it from the game CD.

1.1.5 CONTROLS

The game is controlled by a standard two-button mouse and a Micro-soft compatible keyboard.

1.1.6 HARD DRIVE

You will need 400MB of free space on your hard drive and a double speed or faster CD-ROM drive to install and run the game.

1.1.7 MULTIPLAYER

To play a network game via LAN you must have a LAN-connected 10/100 Mbit network card as well as IPX or TCP/IP protocols installed on your computer.

To play via a modem your computer must have a 28,800 Kbit or higher modem with Internet access installed and connected to a local telephone network. Multiplayer games can also be played via any other kind of Internet access: ISDN, Cable, T1 and others.

1.1.8 GAME INSTALLATION

To install the game, please do the following:

1. Place the Cossacks disk in your CD-ROM drive.
2. If your computer has Autorun capability, the Cossacks Installer menu will automatically appear on your screen.

If your computer's Autorun function is disabled, you will have to run the setup.exe file manually from the root directory of the game CD.

3. Then follow the wizard installer instructions.

1.2.1 TROUBLESHOOTING

Note:

We strongly recommend not to overclock your CPU or other components of your computer. Apart from running the risk of rendering these components useless, there is also a chance of your software, including Cossacks, becoming unstable.

2. STARTING THE GAME

You can launch the game by clicking on the Cossacks icon on your desktop if you chose to create this icon during the installation. You can also run the game by choosing the corresponding entry in the Start - Programs - GSC Game World menu.

After launching you can either watch the intro or skip it by pressing any key. This will take you to the Main Menu where you are free to select a Single Player or Network Game, to Load Game, to access the Options, watch the Intro again or Exit the program and return to Windows.

2.1 GAME MENUS

2.1.1 MAIN MENU

Single Player - Select this option and enter or select a player name to access the Single Player menu where you can select one of the Single Player game variants - Campaign, Single Mission or Random Map.

Multiplayer - Select this option and enter or select a player name to access the Multiplayer menu where you select one of the Multiplayer game variants - Deathmatch or Historical Battle.

Load Game - Select this option to load a previously saved game.

Options - Select this option to change the game settings.

Intro - Select this option to run the intro.

Exit - Select this option to quit the game and return to Windows.



2.1.2 SINGLE PLAYER MENU



Campaigns - Select this option to access the Campaigns menu where you can launch either a Tutorial, an English, a Ukrainian, French or Russian campaign.

Single Mission - Select this option to choose one of the single player missions.

Random Map - Select this option to access the Random Map menu where you can change the game settings.

Back - Select this option to return to the Main Menu.

Campaigns Menu



Selecting one of the campaigns will take you to the corresponding campaign where you can launch only the first mission. After completing the first mission of a campaign you will be able to launch the next.

Single Missions Menu



In the Single Missions menu you will be able to run any single mission in any order you like.

Random Map Menu



The Random Map menu will allow you to adjust several settings for random maps.

You can run the game using either a previously designed map or a random map generated differently each time, which provides you with a practically unlimited selection of maps.

Multiplayer Menu



Deathmatch - Select this option to run the game against other players via a modem, in a local area network or via the Internet. The process of creating and joining a network game is described in chapter 4.2.

Historical Battle - Having chosen this mode you will be able to play through the best known historical battles with another player via modem, LAN or the Internet. The process of creating and joining a network game is described in chapter 4.2

Deathmatch Options



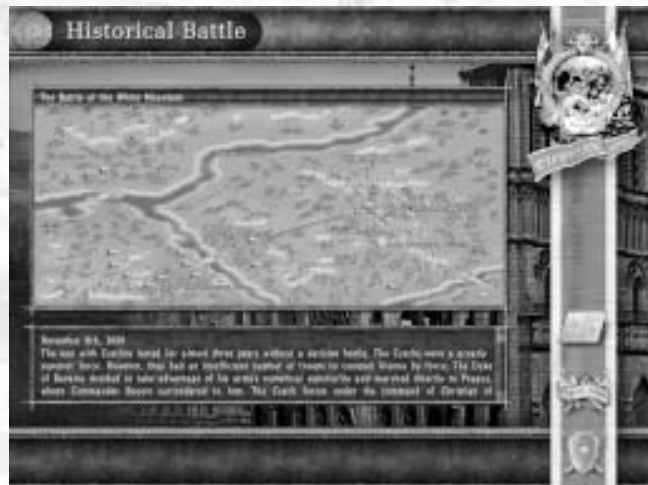
This menu allows you to adjust all the settings for a network game if you are creating your own game or connect to a created one. All the details on creating and connecting to network games as well as on settings are available in section 4.2.

Historical Wars



This section will teach you about the wars played in the game - The Thirty Years' War, The Seven Years' War, The Continental War, The War for the Spanish Succession and the Northern War. You can also select a battle to take part in from this screen.

Historical Battle



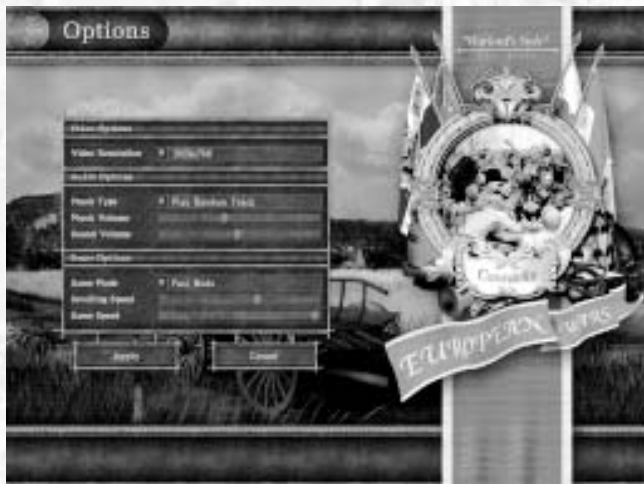
This screen offers detailed information on how the battle you selected developed, what forces took part in it and who was the victor.

Historical Battle Options



Here you can choose the side you are going to fight for as well as find out the conditions of victory.

Options



Video Resolution - This menu allows you to set the video resolution for the game. You will have access to all the modes supported by your video card, for example from 800x600 to 1600x1280. High resolutions have many advantages but, of course, the higher the resolution is, the more powerful a computer you will need.

Music Type - This menu allows you to adjust the running sequence for CD music or turn it off entirely.

The option **Do Not Play Music** allows you to turn the music off.

The **Play National Music Only** mode - allows you to listen to only one musical track that corresponds to the nation you are playing for. In the **Play Random Track** mode, all sixteen tracks will be run randomly.

Music Volume - Allows you to adjust the music volume.

Sound Volume - Allows you to adjust the sound effects volume.

Game Mode - Allows you to adjust the unit animation speed. **Slow Mode** - In this mode all units move slowly. This allows the game events to develop less rapidly, involving less arcade fighting, which gives you time for tactical manoeuvres, etc. **Fast Mode** - In this mode all units move faster and the game events develop more rapidly with more arcade fighting. This lessens your time for tactics and manoeuvres. The difference between the two modes is relative and the choice is purely a matter of taste.

Scrolling Speed - Allows you to adjust the screen scrolling speed. We recommend setting it to the maximum. It only makes sense to lower the scrolling speed if the game is run on a very powerful computer and the scrolling is very fast.

Game Speed - Allows you to adjust the game speed. We recommend setting it to the maximum. It only makes sense to lower the game speed if the game is run on a very powerful computer and the game action is very fast.

ENCYCLOPAEDIA



The game contains a detailed encyclopaedia highlighting historical events that took place in Europe between the 16th and 18th centuries. It also provides detailed game information, i.e. about units and structures and their characteristics. You can run the encyclopaedia from the game by clicking on the "Encyclopaedia" button.

2.2 GAME INTERFACE

2.2.1 Basic Game Screen

All the basic events of the game take place within the basic game screen. The top section of the screen contains an information panel (1) showing the quantity of resources you possess. In the middle of this panel you will find a button (2). Pressing it will cause the function menu to pop up, giving you access to the following:

1. **Game Menu (F12)** - Clicking on this entry or hitting the "F12" key will bring up a menu allowing you to load or save the game, change options or return to the Main Menu.
2. **Show Unit Information (U)** - Clicking on this entry or hitting the "U" key will bring up an additional menu allowing you to obtain detailed information on units and buildings.

Double-click the entry or press the "U" key once more to hide this menu. Find more details about this additional menu in chapter 2.2.6.

3. **Show Game Information (I)** - Clicking on this entry or hitting the "I" key will bring up an additional menu allowing you to get information about the number of points for each player, the losses, market prices and resources extracted and consumed. Double-click the entry or press the "I" key again to hide this menu. Find more details on this additional menu in the section 2.2.7.
4. **Toggle Mini-Map Modes (M)** - Clicking on this entry or hitting the "M" key will enable you to decrease the mini-map size and enlarge the viewed area. Double-click the entry or press the "M" key again to return to the original size of the map.
5. **Show Inaccessible Zones (Q)** - Clicking on this entry or hitting the "Q" key will allow you to see the impassable zones on your map. These areas will be marked with a blue net. The impassable zones are mountain slopes, landscape irregularities, swamps, rivers and seas, etc. Double-click the entry or press the "Q" key again to remove the marking.
6. **Turn On Transparent Mode (O)** - Clicking on this entry or hitting the "O" key will allow you to make all buildings, walls and towers transparent in order to spot all units behind these objects. Double-click the entry or press the "O" key once more to make the objects opaque.



In the lower part of the screen you will see text messages (1), information about selected units or buildings (2), the orders a player can give to a selected object, buildings available for construction by peasants, upgrades available in the selected building (3). There is a mini-map in the lower right corner (4).



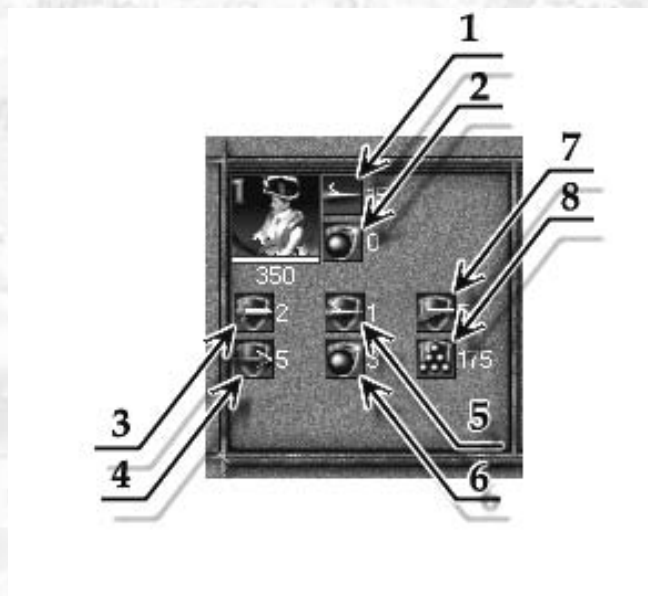
2.2.2 CURRENT TEXT MESSAGES

All the events in the game, i.e. completion of building construction, unit training finished or upgrading completed, are accompanied by corresponding text messages in the lower left-hand corner of your game screen (1).

2.2.3 INFORMATION ON SELECTED UNIT OR BUILDING

Information on selected units or buildings includes: attack parameters and type (1), defence parameter added to all types of defence (2), as well as HP. Thus, the given unit has 350 HP, delivers a stroke of 15 (1), has no defence bonus (2), a protection of 2 against sabres and swords (3), 5 against arrows (4), 1 against pikes and lances (5), 3 against cannonballs (6), 5 against rifle bullets (7), 175 against grapeshot (8).





Find more details about parameters of units and buildings under the respective section.

2.2.4 MINI-MAP

The mini-map gives a scale reflection of the whole map you are playing on. This is an important part of the game interface. Unlike the main screen, where you see only a small map area, the mini-map allows you to notice all the events on the territory under the control of your units. Thus, the mini-map allows you to spot and control all the events taking place on your map. With the mini-map you can see enemy forces moving, where your troops are under attack, locate enemy objects etc.

The territory that your units or buildings cannot see is hidden by opaque fog of war.

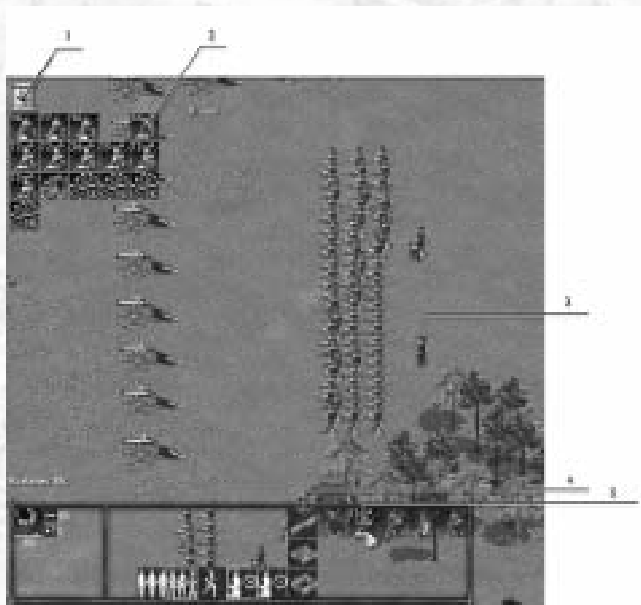
The mini-map surface shares characteristics with the main screen map. You can point the direction of movement or attack for your forces by clicking on the mini-map. Having clicked on the mini-map you will be transferred to a correspondent surface area.

You can increase or decrease the mini-map size by pressing the "M" key.

Note:

An important and useful mini-map feature is the ability to show where your forces and buildings are attacked. When an enemy assaults your units or buildings, a white rectangle will appear, accompanied by a special sound. Keep a close eye on the mini-map in order to react to assaults in time.

2.2.5 MILITARY FORMATIONS AND BATTERIES MENU



Once you have at least one formation or a battery, the Formations and Batteries menu icon will pop up in the interface (1). On pressing this icon, you will see icons of all the formations you currently possess (2). These icons show you which troops and guns are in formations, the types of formation they are in, their numbers and the number of soldiers or guns they include.


This menu allows you to quickly select the required formation or battery. Point the cursor at a formation icon to see it marked on the map. Clicking on a formation icon will select the corresponding formation.

2.1.6 UNIT INFORMATION MENU

Pressing the "U" key or the corresponding entry in the functional menu will activate a Unit Information Menu. Here you can obtain detailed information about a unit - its parameters, value, resources consumed, upgrades etc.







Clicking on the entry "General" displays a unit's cost parameters, building time, resources spent and consumed, as well as the number of points given for this unit when scores are drawn up.

Musketeer 17c.



[General](#)
[Description](#)
[Unit Upgrades](#)
[Next](#)
[Previous](#)

Price:

14

50

5

Upkeep:
 Iron (per shot): 3
 Coal (per shot): 3
 Building time: 600
 Value: 0.0

1

2


3

4






5


6

Musketeer 17c.




[General](#)
[Description](#)
[Unit Upgrades](#)
[Next](#)
[Previous](#)












Attack upgrades

	II	III	IV	V	VI	VII
	10	+1	+1	+2		

Shield upgrades

	II	III	IV	V	VI	VII
	0	+1	+2	+3	+1	+1
	1	+1	+2	+3	+1	+1
	1	+1	+2	+3	+1	+1

Description

Clicking on "Description" displays a brief description of a unit or building, its advantages and drawbacks.

1 - wood, 2 - gold, 3 - stone, 4 - food, 5 - iron, 6 - coal

Unit Upgrades

Pressing "Unit Upgrades" will allow you to look at upgrades available for this unit or building.

Large icons indicate general upgrades carried out in the academy or in the blacksmith. Below you will find tables showing how far unit attack and defence parameters can be improved by training units in barracks and stables.

Point at any upgrade with the cursor to receive a pop-up hint describing the upgrade and its cost.

Next

Clicking on "Next" will take you to the next unit or building.

Previous

Clicking on "Previous" will take you back to the previous unit.

2.2.7 GAME INFORMATION MENU

Pressing the "I" key or clicking on the corresponding entry in the functional menu brings up the Game Information menu. Here you can obtain detailed information about each player's number of scores, losses, market prices and quantity of resources extracted and consumed.

General Information	
	?
Score	113.21
Occupied territory	0
	?
Score	56.31
Occupied territory	0
	?
Score	34.07
Occupied territory	0

1 2 3 4

1 - General information, 2 - List of casualties, 3 - Market prices. (Comparative chart for exchange of resources) 4 - Number of people occupied procuring resources.

2.2.8 STATISTICS SCREEN (FOR RANDOM MAP AND DEATHMATCH MODES ONLY)

Once a game in Random Map or Deathmatch mode is over, press ESC to proceed to the Statistics section, which includes three screens providing detailed information on the game.

2.2.9 POPULATION DYNAMICS CHART



The top section of this screen contains a chart of population changes within the game, where the colour of the curves corresponds to the players' distinguishing colours.

The horizontal bar reflects the duration of the game, the vertical bar represents the population.

Below are the players' upgrade sequences. They are arranged on the chart according to the time they took place.

Pointing the cursor at an upgrade icon will activate a pop-up hint describing what kind of an improvement it is.

Click on the "Forward" button to access the next (score) screen.



Score Dynamics Chart



The top section of this screen contains a chart showing the score changes for each player in the game. The curve colour corresponds to the players' distinguishing colour.

The horizontal bar reflects the time, the vertical bar represents the population.

Below are the players' upgrade sequences. The improvements are arranged according to the time scale on the chart.

Pointing the cursor at an upgrade icon will activate a pop-up hint describing what kind of an improvement it is.

Click on the "Forward" button to access the next (statistics) screen. Click on "Back" to return to the previous (population) screen.

Statistics

Resource	Initial	Cost	Spent	Remaining	Initial	Cost	Spent	Remaining
Food	10,000	1,000	2,000	8,000	Food	1,000	2,000	8,000
Wood	10,000	1,000	2,000	8,000	Wood	1,000	2,000	8,000
Gold	10,000	1,000	2,000	8,000	Gold	1,000	2,000	8,000
Crystals	10,000	1,000	2,000	8,000	Crystals	1,000	2,000	8,000
Units	10,000	1,000	2,000	8,000	Units	1,000	2,000	8,000

Unit Type	Count	Cost	Spent	Remaining
Infantry	100	1,000	2,000	8,000
Cavalry	100	1,000	2,000	8,000
Artillery	100	1,000	2,000	8,000
Naval	100	1,000	2,000	8,000
Air	100	1,000	2,000	8,000
Magical	100	1,000	2,000	8,000
Special	100	1,000	2,000	8,000
Buildings	100	1,000	2,000	8,000
Structures	100	1,000	2,000	8,000
Defenses	100	1,000	2,000	8,000
Units	100	1,000	2,000	8,000
Buildings	100	1,000	2,000	8,000
Structures	100	1,000	2,000	8,000
Defenses	100	1,000	2,000	8,000

This screen will provide you with detailed information on virtually all the game parameters. Here you can see the amount of resources you procured, how much of them was spent and what on, how many units and what types you built and lost, etc.

Click on "Back" to return to the previous (score) screen.

How to resume a game

Click on "Return to game" to return to the game.

How to return to the menu

Click on "Back to the Main Menu" to return to the menu.

3. CONTROLS

You can control the game with the help of the normal two-button mouse. There are hotkeys available for the most frequent or important actions. You will find a complete list of hotkeys under 3.1.18.

3.1.1 SELECTING UNITS OR BUILDINGS

To select a unit or a building, click on it with the left mouse button.

To cancel the selection of a unit or a building, click on any other place on the map with the right mouse button.

3.1.2 SELECTING SEVERAL UNITS OR BUILDINGS

To select several units or structures, left-click on any other place on the map, then hold the mouse button down while moving the mouse. You will see a frame following the cursor. All your units or structures that are within this frame will be selected as soon as you release the mouse button.

3.1.3 CONVENTIONAL UNIT MOVEMENT

Select a unit, a group of units or a formation.

Click on the map or mini-map with the right mouse button to indicate the place you want your units to go to.

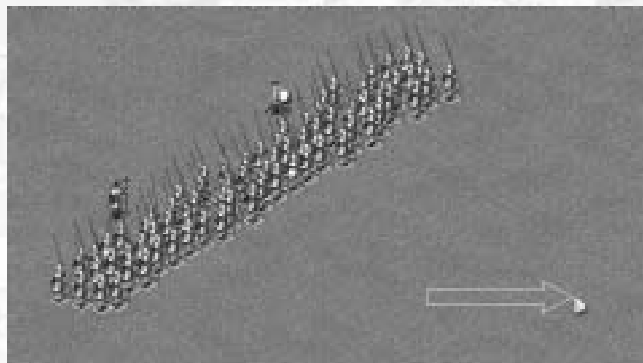
3.1.4 DIRECTIONAL UNIT MOVEMENT

Select a unit, group of units, a formation or battery.

Click and hold the right button on the map indicating the place you want your units to go to. Keep holding the right mouse button and move the cursor - you will see a pointer. The tip of it will indicate the location of your units and the end will indicate the direction for units to face.

The directional control of your units will not only allow you to better control and use your troops, but also to gain tactical superiority over the enemy.

For example, rear and flank attacks are very dangerous, especially for formations.



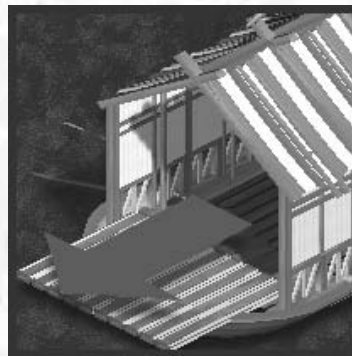
3.1.5 HOTKEYS FOR UNITS AND FORMATIONS

Any unit, group of units, formation or battery can be hotkeyed. Select a unit, group of units, formation or battery and press CTRL + any number from 0 to 9. You can now select this unit, group of units, formation or battery by pressing the assigned key.

You can add other units to the group of selected units. Simply select your units, hold Shift and select the units to be added. Now two groups of units are selected. Press CTRL + any number from 0 to 9 to hotkey the newly set group.

3.1.6 UNIT MOVEMENT ON DEFINED ROUTES

You can define the route for your units. Select a group of units and click on the map in different places while holding the Shift key to set a route for your troops to follow.



3.1.7 UNIT MOVEMENT OVER WATER SURFACES

You can transport your units across water by means of a ferry. You can build a ferry in the shipyard. Select the ferry and click on the shore where your units are gathered. The ferry's mooring point will be indicated by a flashing red cross. Then select your units and click on the ferry for them to board it. The ferry's capacity is 80 units. When the units are on board, they will be able to cross the water. When you are close to the other side, carry out the same mooring procedure. To put units ashore select the ferry and click on the "Disembark Unit" icon, which is on the interface screen.



3.1.8 UNITS' ACTIONS

Different units can do different things. Peasants, for example, can chop trees, quarry stone, harvest crops from the fields, build and repair structures, etc. Fighting units can attack and capture unguarded peasants, artillery and some enemy structures.

Every described activity is identified by a special cursor which will appear when you select a corresponding unit and pass the cursor over different objects. This will allow you to learn what exactly each unit can do with specific objects.



3.1.9 BUILDING UNITS

Select the appropriate structure to build your unit by clicking on it with the left mouse button. You will see unit icons on the interface screen.

Left-click on the corresponding unit. The number 1 will appear on the icon, which means you have ordered one unit to be built. A white line will increase along the bottom of the icon. When the white line reaches the end, the unit is complete and will exit the building in which it was created.

Detailed information on unit construction is available under "Technologies and Upgrades".

3.1.10 CONSTRUCTING BUILDINGS

Select one or several peasants to see icons of the structures available in the lower left-hand part of the screen.

Left-click on the icon of the structure you want to build. The cursor will change to show a flashing semi-transparent structure.

Move the flashing structure to the place where you want to build it and left-click. The foundation of the structure will appear on the surface and the peasants will begin to build it.

Detailed information on structure construction is available under "Buildings".

3.1.11 REPAIRING DAMAGED BUILDINGS

Select one or several peasants.

Right-click on a damaged structure for the peasants to start repairing it.

3.1.12 PROCURING RESOURCES WITH PEASANTS

Select one or several peasants.

Left-click on the resources you want to procure.

3.1.13 UPGRADES

Select a structure where upgrades are available to see upgrade icons in the lower left part of the screen.

Left-click on the required upgrade.

You will see a progress bar indicating the progress percentage of the upgrade. As soon as the progress bar reaches the end, the upgrade is complete.

3.1.14 ATTACKING ENEMY UNITS

Select fighting units.

Right-click on the enemy units you want to attack. Your units will move to attack enemy objects.

Note:

Shooting units, artillery and ships cannot shoot over hills, walls and structures.

3.1.15 ATTACKING ENEMY BUILDINGS

Select artillery, ships, towers, grenadiers or archers and right-click on the enemy object.

Note:

Only artillery, ships, grenadiers and archers can destroy structures, stone walls and towers. Other units cannot attack structures, towers and walls.

3.1.16 SETTING ACTION SEQUENCE

You can set the sequence of actions for units to follow. For example, peasants can be given a sequence of several structures to build. To set the sequence you must:

Select units.

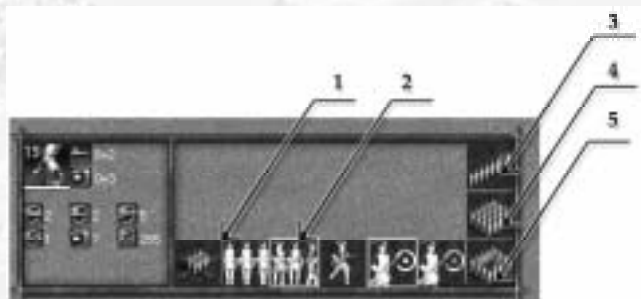
Press and hold Shift while setting the action sequence.

3.1.17 GIVING ORDERS

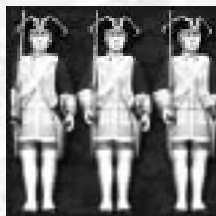
You can set different action modes for your troops to make them act as efficiently as possible. In order to give orders to a fighting unit or group of units you must:

Select fighting units to see order icons in the lower left part of the screen (2).

Click on the corresponding icon.

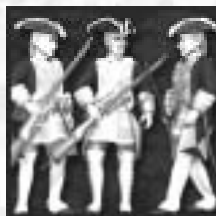


Stand Ground



After receiving this order your units will protect their position and not fall back, whatever happens. They will not chase enemies who pass by, but they will attack if an enemy enters their range of fire.

Cancel Stand Ground



This order cancels the Stand Ground order.

Go and Attack



On receiving this command units moving from point A to point B will always attack and pursue enemies they come across. After the enemy is eliminated, your units will continue to point B.

Enable Attack



Units which receive this command will always attack and pursue any enemy they spot. For instance, if you send your units from point A to point B they come across an enemy detachment, they will attack and chase the enemy until it is eliminated. As soon as the enemy is eradicated, your units will remain in that position without proceeding to point B.

Disable Attack



Units receiving this command will never attack or pursue an enemy. For example, if you send your units from point A to point B, they will ignore all enemy troops and continue moving. Thus, your units will always reach point B.

3.1.18 HOTKEYS

F12 - brings up a menu

M - reduces/enlarges the mini-map

I - show/hide game information

U - show/hide object information

Q - show/hide impassable areas

O - turn transparent mode for structures on/off

Del - delete selected object

Pause - pause game

D - increase game speed

Enter - enter password

CTRL + A - select all units except ships

CTRL + S - select all ships

CTRL + B - select all structures

Select unit & CTRL + Z - select all units of this type

Double-click on unit

- select all units of this type within the visible area of the map

Select structure & CTRL + click on the map
- show the assembly point for constructed units

Select unit & CTRL + 1 - 9 - hotkey unit or squad

1 - 9 - quick access to the hotkeyed unit or squad

Select unit & Space
- place selected unit in the centre of the screen

CTRL + P - show all idle peasants

CTRL + M - show all improperly filled mines

Select unit & Shift + select additional unit
- add new units to the group of selected units

Select unit & Shift + click on the map - set the route for the units

Select game objects (including CTRL + A, CTRL + S and CTRL + B)
& click on the game object icon in the menu
- select all objects of this type

Select game objects (including CTRL + A, CTRL + S and CTRL + B)
+ Shift & click on the game object icon in the menu
- deselect all objects of this type

Select unit & A + point out the place for the unit to go to
- selected units go to the destination point attacking all the enemies
they meet on the way

4. GAME SETUP

4.1 SINGLE PLAYER

4.1.1 CAMPAIGN

In campaigns, players are required to complete a number of missions united by the same storyline. You will have access to 5 campaigns: English, Ukrainian, French, Russian and Tutorial. When you select one of the campaigns for the first time, you will be able to run only the first mission. It must be completed in order to get through to the following mission.

Starting Campaigns

Select the Single Player option in the Main Menu. Enter your name or select an existing name. In the next menu select the Campaigns option and afterwards choose the campaign and mission and click on "Start".

In order to learn the basic rules of Cossacks it is recommended to complete the Tutorial. Select the Tutorial Campaign in the Campaigns menu.

Gameplay

The missions in Cossacks are full of thrilling and hazardous adventures. You will participate in events that will determine the fate and history of the world.

Before starting a mission you can learn the true historical background preceding the events described in the mission.

At the beginning of your mission, you will receive a list of current objectives, which it is your first and foremost task to complete. While playing through the missions you will receive information on other tasks.

How can I find out about my current objectives, tasks accomplished and conditions of failure?

Press the "F1" key to find out about your current objectives and conditions of failure.

Note: If you completed several missions of a campaign in a previous game and return to the same campaign, you should select the name you used before in the name entry section in order to continue the missions of that campaign. Should you select or enter another name, you will be unable to continue your game and will have to start from the very beginning or continue somebody else's game.

4.1.2 SINGLE MISSIONS

Single missions have no common storyline. You can run any of ten missions in any order you like.

Starting Missions

Select the Single Player option in the Main Menu. Enter your name. In the following menu select the Single Missions option and afterwards choose any mission.

4.1.3 RANDOM MAP

In the Random Map mode you can stand off computer opponents on randomly generated maps as well as on previously designed maps. You can set 1 to 6 computer opponents, choose the nations you and your opponents are going to play for, select a previously designed map or set parameters for a randomly generated map.

Starting a Random Map Game

Select the Single Player option in the Main Menu. Next, select the Random Map option which will take you to the section where you can adjust all game settings. To receive help on the various settings, keep the cursor pointed at the title. A help icon will appear beneath it.

Note:

Only the landscape type Land allows seven players to take part in a game. All other landscapes allow only four players. If you set more than four players, you will not be able to access all the other types of landscape. Set only four players and you will be able to access all types of landscape again.

4.1.4 RANDOM MAP PARAMETER SCREEN



Players - Below there is a list containing your name and the names of the computer opponents you will be fighting against. Only one computer opponent is set by default. You add five more computer opponents by clicking on "None" for the submenu to open. Then select the Computer option.

Nation - This entry lists the nations you and your opponents will be playing for. You can select any of the sixteen nations available for yourself and your opponents by clicking on the name of the country near the corresponding player and selecting a nation from the submenu.

Colour - Here you will find the players' distinguishing colours. Colours cannot be changed in Random Map mode.

Game Preferences - This allows you to set the difficulty level corresponding to the AI level of your computer opponents. The options are Easy, Normal, Hard or Very Hard. Beginners are recommended to start with an Easy game. Hard and Very Hard levels with a great number of opponents are recommended for hardcore players only.

Designed Map - Selecting this option will allow you to choose a previously designed map to use in your game.

Random Map - Selecting this option will access parameters to be used for random map generation, e.g. Landscape Type, Nature of Ground, Initial Resources and Minerals. Detailed information on Random Maps is available in the section 4.1.5.

Map Preview - This option will give you a preview of a map with all the parameters you have chosen.

4.1.4.1 SELECTING A NATION

You can choose any of sixteen nations - Austria, Algeria, France, England, the Netherlands, Piemonte, Portugal, Prussia, Poland, Russia, Spain, Sweden, Saxony, Turkey, Ukraine and Venice - that contributed much to world history from the 16th to the 18th century. Every state possesses a certain game balance which takes into consideration the particularities of its economic and scientific systems, unique units and architecture. This means that when you choose a nation you will receive a unique set of advantages and shortcomings that will give you a practically unlimited range of possibilities to lead your state to victory and prosperity when playing on different landscapes.

4.1.5 RANDOM MAP PARAMETERS

Landscape Type

This parameter defines the type of landscape to be generated for a map. The following basic landscape types are available: Mediterranean, Peninsulas, Islands, Continents, Continent. The most notable difference among these types of landscape is the water and land ratio which will greatly affect tactics and strategy. For example, there is almost no water at all on a Land map, which means no fleet is required. Islands, on the other hand, are totally surrounded by water, which means your troops will be unable to access any islands held by the enemy without transport ships. The type of landscape you have chosen will also affect the maximum number of players that can play on a map (e.g. seven players on a Land map). All the other types of landscape can be occupied by no more than four players at a time.

Land - The surface of the map is completely covered with solid ground with only a few small ponds.

Mediterranean - The surface of the map is covered with solid ground. The centre of the map is covered by sea.

Peninsulas - The map is edged by peninsulas but otherwise covered with water.

Islands - The surface of the map is covered with water interrupted by a few small islands.

Continents - The surface of the map is covered with water, there are several big continents in the middle.

Continent - The surface of the map is covered with water, there is one large continent in the middle.

Nature of Ground

This parameter defines the ground nature of the map to be generated. The following options are available: Plain, Low Mountains, High Mountains, Highlands, Plateaus. The nature of ground defines the elements of landscape which will appear on the map, e.g. mountains, hills, plateaus and their quantity, shape, size, etc.

Plain - Practically flat terrain covered with small hills.

Low Mountains - The terrain is covered with low mountains.

High Mountains - The terrain is covered with high mountains.

Highlands - The terrain is covered with a large quantity of low mountains.

Plateaus - The terrain is covered with plateaus.

Initial Resources

This parameter defines the amount of resources the players start off with. A small amount of initial resources will result in a long development period while a large quantity will shorten the duration of development and let you get down to military actions much faster.

Normal - The game starts with 1,000 units of each resource.

Rich - The game starts with 4,000 units of each resource.

Thousands - The game starts with 5,000 units of each resource.

Minerals

This parameter defines the number of mineral deposits to be generated. On a map with few mineral deposits they become vital objects and controlling as many as possible is vital for victory. Playing on a rich map with a lot of deposits makes them less important, you can continue your development even if you control only a small portion of the map.

Lean - Poor map.

Medium - Map with medium quantity of resources.

Rich - Map rich in resources.

4.1.6 SAVING A SINGLE PLAYER GAME



1. When playing, press the "F12" key to bring up the Save Game menu.
2. Enter the name you want your game to be saved under and click on "Save".
3. Click on "Cancel" to return to the game.

4.1.7 HOW TO LOAD A SAVED SINGLE PLAYER GAME

1. Press the "F12" key or click on the Load Game scroll in the Main Menu.
2. Select the name of the file your game was saved under by clicking on it with the cursor.
3. Click on the "Load" button to load the game.
4. Click on "Cancel" to return to the game.



4.2 MULTIPLAYER

Up to seven people can play Cossacks via a modem, in a local area network or via the Internet. Select the challenging Deathmatch mode or participate in a Historical Battle.

4.2.1 WHAT DO I NEED TO RUN A MULTIPLAYER GAME?

To run a multiplayer game one player must create a game for the other players to connect to. It is recommended that the player with the most powerful computer creates the game.

4.2.2 CREATING A LAN OR MODEM GAME





1. Select the Multiplayer option in the Main Menu.
2. Enter or choose a name.
3. Select a game type in the Multiplayer menu, i.e. Deathmatch or Historical Battle.
4. Select the protocol in the Connection Protocol menu. The following protocols are supported: IPX, TCP/IP, Internet connection.

Note:

All players who are about to connect to the created game should select the same protocol set as the server.

5. After selecting a protocol, click on the "Create" button.

Deathmatch - Additional Information:

- 6.1. The Multiplayer Options menu allows you to adjust all game settings. Detailed information on the Multiplayer Options menu is available under 4.2. 10. Once the LAN game has been created, other players will be able to join it.

Note:

Only the player that created the game can adjust the settings (i.e. choose a map, set victory conditions and random map parameters).

Historical Battle - Additional Information:

- 6.2. The Historical Wars menu allows you to select a battle to participate in. Once the LAN game has been created, other players will be able to join it.

Note:

Only the player that created the game can select a battle.

7. Once all players connected to a game have adjusted all settings available to them and clicked on "Ready", the player who created the game will see a "Start" button. The game will begin as soon as the "Start" button is activated.



Note:

All the players connected to a game must click on "Ready", otherwise the player who created the game will not have the "Start" button available and the game cannot be launched.

Note:

A player wishing to create a LAN game must have the licensed game CD inserted in the CD-ROM drive.

Note:

All players joining a network game must have the latest version of the game installed. For example, if four players have version 1.00 installed and the fifth is using version 1.01, the game will not run.



1. Select the Multiplayer option in the Main Menu.
2. Enter or select a name.
3. Select a game type (Deathmatch or Historical Battle) in the Multiplayer menu.
4. Select the protocol in the Connection Protocol menu. The following protocols are supported: IPX, TCP/IP, Internet connection.

Note:

All players who are about to connect to the created game should select the same protocol as the server. Otherwise they won't be able to join the game.



5. After you have selected the protocol, click on "Join".
6. This will take you to the Select Game menu where you will see created games. If there is no created game in the list it means that the player creating the game has not yet finished. Click on the "Refresh" button until your game appears in the list.
7. Select the game you want to connect to and click on "Join".

Deathmatch - Additional Information:

- 8.1. Accessing the Multiplayer Options menu will enable you to make the following settings: select a nation, enter into an alliance and select your distinguishing colour. The rest of the settings is unavailable. They can be adjusted only by the player who created the game.

Historical Battle - Additional Information:

- 8.2. Accessing the Historical War menu will provide you with information about the battle. If you click on a historical (on the left side) you will get into the Historical Battle menu (on the right side).
- 8.3. The Historical Battle menu will teach you about the course of the battle. Clicking on the appropriate button will take you to the Historical Battle Options menu where you can choose a party to play for.
- 8.4. Once you have adjusted the settings, click on "Ready" and wait for the player who created the game to click on "Start" and launch the game.





Note:

All players joining the network game must have the latest version installed. For example, if four players have version 1.00 installed and the fifth is using version 1.01, the game will not run.



4.2.4 NETWORK GAME CONNECTION VIA THE INTERNET

Cossacks version 1.00 does not include GameSpy game service support. However, by the time the game is available in stores you will be able to download the first patch including game support via the Internet. Please visit the game's official website www.cossacks.de and download the patch allowing you to play via GameSpy. You will also find detailed information on creating and connecting to network games via the Internet.

4.2.5 DEATHMATCH

The Deathmatch mode allows up to seven people to play in a local area network, with a modem and via the Internet. Before you start a game in Deathmatch mode, you can adjust a number of settings such as selecting a nation and distinguishing colour, entering into alliances, setting victory conditions and random map parameters or selecting a previously designed map which will provide you with a vast range of game variants.

Starting a Deathmatch Game

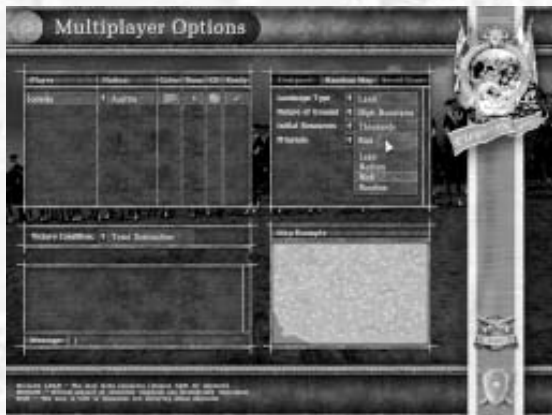
Select the Multiplayer option in the Main Menu.

Enter or select a name.

Select the Deathmatch option in the Multiplayer menu.

Then go through the process of creating a multiplayer game or connecting to a multiplayer game, as described in depth in the section 4.2.

4.2.6 MULTIPLAYER PARAMETERS SCREEN



Players - Below there is a list containing your name and the names of the computer opponents you will be fighting against. Only one computer opponent is set by default. You add five more computer opponents by clicking on "None" for the submenu to open. Then select the Computer option.

Nation - This entry lists the nations you and your opponents will be playing for. You can select any of the sixteen nations available for yourself and your opponents by clicking on the name of the country near the corresponding player and selecting a nation from the submenu.

Colour - Here you will find the players' distinguishing colours. Colours cannot be changed in Random Map mode.

Team - This column near your name allows you to choose your allied players.

CD - This entry states which player has the game disk inserted in the CD-ROM drive.

Ready - Select this option to state that you are "Ready" to start the game. It also enables you to see whether other players are ready.

Victory Conditions - Select this option to set the victory conditions. The following conditions are available: Total Destruction, Territory Capture, Score.

Designed Map - Selecting this option will allow you to choose a previously designed map to use in your game.

Random Map - Selecting this option will access parameters to be used for random map generation, e.g. Landscape Type, Nature of Ground, Initial Resources and Minerals. Detailed information on Random Maps is available in section 4.1.5.

Saved Game - Select this option to continue a network game that you have previously saved or that was interrupted due to connection problems, for example. Detailed information on loading a saved game is available in section 4.2.2.

Map Preview - This option will give you a preview of a map with all the parameters you have chosen.

Message - Select this option to send messages to other players. All chat messages will be seen above.

4.2.7 ENTERING INTO ALLIANCES

Before starting a network game you can enter into alliances with other players by setting the same team number near your name in the Team column.

When entering into an alliance with other players, you become friendly towards each other. That means your troops cannot attack one another.

By default, there is a cross in the Team column near each player, which means that everyone plays for himself alone. Clicking on the cross changes the numbers from that stand for the team number you are going to play for (1 to 7). For example, if you choose 1 you will enter into an alliance with all players who have chosen the same team. If nobody chooses the same team number as yours, you will have failed to enter into an alliance.

4.2.8 VICTORY CONDITIONS

The Victory Conditions parameter defines the criteria according to which the victory is consigned.

Total Destruction - The game lasts until all opponents are totally annihilated. The opponent is considered annihilated if:

- He has less than 10 units left.
- He has no town hall and no peasants left.

Territory Capture - Victory is assigned to the player who gains control over the largest territory within a certain period of time, which is set prior to the game. Territory controlled by the players is turned into scores that determine which player is victorious.

The map is conditionally split into small squares the size of which is slightly smaller than the average radius of the unit's vision. If at least one unit of yours and no other nations' units are in this square, it is considered to be controlled by your nation and you are given a point. If a square is occupied by your units and the units of other nations, the square belongs to nobody and nobody is given a point. If you leave the square or are forced off it, you will lose a point.

Score - Victory is assigned to the player who has the most points within a certain period of time, which is set prior to the game. Points are given according to the following rules:

1. Constructing a unit or a building will give you X points.
2. If a unit or a structure is destroyed by an opponent or if you dismiss it, you will lose 2X points and the opponent that destroyed that unit or structure receives 3X points. Conversely, if you destroy an opponent's structure or unit, you will receive 3X points and the opponent will lose 2X points.
3. If you capture an opponent's unit or structure, you will receive 5X points and your opponent loses 5X points.



4.2.9 HISTORICAL BATTLE

In the Historical Battle mode you will have to conduct a fight on the fields of famous historical battles from The Thirty Years' War, The Seven Years' War, The Continental War and The War of the Spanish Succession. Historical Battle maps have the exact landscape, location, composition and ratio of the opposing forces of the real battles. Having placed yourself at the head of one of the parties you will have to conduct a fight and to prove or deny its outcome marked in history.

In this mode you needn't go into economic and scientific matters or form your own army. You will be given an army which you must lead to victory guided by your strategic and tactical skills.

Before you start the battle you can read about the preceding historical events, the course and the outcome of the fight.

Starting a Historical Battle:

1. Select the Multiplayer option in the Main Menu.
2. Enter or choose a name.
3. Select the Historical Battle option in the Multiplayer menu.
4. Then follow the procedure for multiplayer game creation or for connecting to a multiplayer game which is described in section.

4.2.10 HISTORICAL BATTLE OPTIONS



Players - Below there is a list containing your name and the names of the computer opponents you will be fighting against. Only one computer opponent is set by default. You add five more computer opponents by clicking on "None" for the submenu to open. Then select the Computer option.

Nation - This allows you to choose one of the opposing nations corresponding to various opposing forces.

Colour - Here you will find the players' distinguishing colours. Colours cannot be changed in Random Map mode.

CD - This entry states which player has the game disk inserted in the CD ROM drive. There is also an indication of the game versions installed.

Ready - Select this option to state that you are "Ready" to start the game. It also enables you to see whether other players are ready.

Description - This window will provide you with a brief description of the forthcoming battle objectives.

Battle Map - Here you will find a map of the area where your battle will take place. Basic information will be highlighted on it.

Message - Select this option to send messages to other players. All chat messages will be seen above.

4.2.11 PECULIARITIES OF THE HISTORICAL BATTLE GAME

In a Historical Battle each party has equal opportunities for victory. The main technique of practically all battles to overcome the enemy's defence is to use your artillery correctly. We recommend not to concentrate cannon in one place and to properly guard their rear. Heavy fire can destroy your enemy's troops and enable you to capture all his cannon. Cavalry should move in loose order. The front lines of the cavalry are bound to be destroyed, but the rest will be able to capture cannon, as it takes them a long time to reload. If you have packhorses, don't keep them in one place. Spread the packhorses among your troops and remember to guard them. A sudden loss of packhorses may result in failure. And bear in mind that the main goal of the attacking forces is to capture key positions. This is the main goal of the game and the attackers must do their best to achieve it. You will see the location of these key positions on your mini-map when you press CTRL.

A key position is considered captured if at least one unit of yours and none of the enemy's units are present in the area. You must capture three out five areas (if you are defending then you must retain them). Defenders should retain these key positions for 23 to 30 minutes. They can cede two areas at the very beginning in order to concentrate all the troops on the three remaining areas. In the Battle of Lützen the objective of the Prussian attacking forces was to totally annihilate the Austrians. To fulfil their mission the Prussians had to act very fast and not let the enemy concentrate his troops.

In the Battle of Malplaquet the objective boiled down to the destruction of the French troops by the allied forces of Austria, England and the Netherlands. The allied forces couldn't let the defenders fall back to safer positions at the altitudes. In the Battle of the White Mountain one of the possible tactics for the defenders was a quick move to the bridge in the west (left part of the map) during the first few seconds of the battle. In the game, if it takes the attackers too much time to get their troops across the river, the Czechs will easily capture the bridge and keep the enemy on the other side. But, should the imperial troops manage to cross the river before the Czechs, the latter will be defeated. In the Battle of Poltava mission the Russians have a double preponderance of force while the Swedish musketeers have a number of upgrades available that make them almost unbeatable. Therefore, the main obstacles for the victory of the Swedish troops are the Russian cannon, not the great strength of the opposing force. In the Battle of Gangut Russian troops are composed of semi-galleys which are far from being indestructible. That is why, if the Swedish troops act very decisively and do not let Russian ships circle them, they will be victorious.

4.2.12 SAVING A NETWORK GAME

In Cossacks it is possible to save a network game in order to continue it later. To save a network game, please do the following:

1. Press the "F12" key during the game.
2. Select the Save Game option.
3. Enter a file name and click on "Save".

4.2.13 NETWORK GAME AUTO SAVE

Network Game Connection Stability

Network game connection stability depends mainly on the efficiency of your communication equipment, as well as on various external factors that affect the quality of the connection. Efficient communication equipment and a stable connection will allow you to play a high speed network game. Very often, however, at least one player has equipment problems or the channel he is using for the connection is overloaded or unstable. In this case, the network game may slow down or players may even be disconnected. (The latter occurs very seldom.) If a player has been disconnected during a network game, you can continue the game with the AutoSave option.

What is AutoSave?

When you play a network game it is automatically saved into the AutoSave file every four minutes. This means that, if you are disconnected or the game is suddenly interrupted, you can continue the game later by loading the AutoSave file.

4.2.14 LOADING A SAVED OR INTERRUPTED GAME

To load a saved or interrupted game you need to:

- Select the Multiplayer option in the Main Menu.
- Enter the name you used in the game.
- Choose the protocol you used for the connection.

For the player who created the game:

- 4.1. Click on the "Create" button which will take you to the Multiplayer Options menu.
- 4.2. In the Multiplayer Options menu, select the distinguishing colour you used before and click on "Saved Game".
- 4.3. Select the file with the saved game or the AutoSave file in the Saved Game menu if the game was suddenly interrupted.
- 4.4. Wait for all the players to connect to the game and to click on "Ready".
- 4.5. Click on "Start" when all the players are ready to continue the game.

For the players connecting to the game:

- 4.6. Click on the "Join" button which will take you to the Select Game menu.
- 4.7. Click "Refresh" until you see the game you need in the list.
- 4.8. Select it and click on "Join".

4.9. Choose the distinguishing colour you used before in the Multiplayer Options menu. Afterwards click on "Ready".

4.10. As soon as all the players have clicked on "Ready" and the player who created the game has selected "Start", the game will be continued.

Note:

If you want to continue a saved game, make sure the following conditions are fulfilled:

The number of players who are willing to continue the network game should be identical to the number of players in the interrupted game.

Choose the same distinguishing colour you used in the interrupted game.

4.3 INTERNET LOBBY

Cossacks allows players to fight their way to victory in multiplayer games via the Internet. Up to seven players can take part in each Internet game.

Note: To play via the Internet you must have an IP address. Almost everyone connected directly to a provider has such an address. If multiple computers are joined to an internal LAN with just one Internet connection, then all the computers within the LAN share one IP address. In this case you will be able to play via the Internet from the server only.

In order to play with a small number of players (2-3) a modem of 14,400 or higher is needed. When playing with more than 3 players a modem of 28,800 or higher is needed.

In order to start an Internet game, please do the following:

1. Launch Cossacks. Click on the Multiplayer button, enter your name, select the type of game, then left-click on Internet Game in the Net Protocol menu.

The IPX Network option allows you to play in a LAN using an IPX protocol. Select this option if you have only the IPX protocol installed.

TCP/IP LAN Connection allows you to play in a LAN using the TCP/IP protocol. The TCP/IP connection is the most stable and we recommend using this connection when playing in a LAN.



Direct TCP/IP allows you to play via the Internet by entering the server's IP address. You can only use the Direct TCP/IP connection if you know the server's IP address.

The Internet Game option allows you to play via the Internet. Selecting this option will bring up a list of all currently existing Cossacks servers.

2. Press Create/Join to get to the Internet Game menu

There are several sections in this menu:

- 1) A Games section displaying currently available servers;
- 2) A Players section providing information on how many players have already joined a game and how many more can join it;
- 3) The Ping section shows you the ping of the game's server;

- 4) The Version section notes the host's version. You can only join if your version matches the version stated. If you have a lower version, please go to www.cossacks.com to download the latest updates;

Note: If no version is mentioned, this means the game was created within the GameSpy Arcade.

- 5) The Game Type section displays basic game info: Deathmatch or Historical Battle;
- 6) In the Level section the level of this room's players is indicated (Rookie, Skilled, Hardcore).



Note: If a game is "locked", then it is password-protected, i.e. you must know the password in order to join; all the rest are open games.

The "All" options allow you to filter games by the parameters of the columns they are placed under.

Besides, you can sort games typing in the line directly below the Games section. (You can enter the name of a room to find it promptly from among the rooms on the server.)

In the lower right square you can see the names of players willing to play. If a name is displayed in red, this means that that player is already playing.

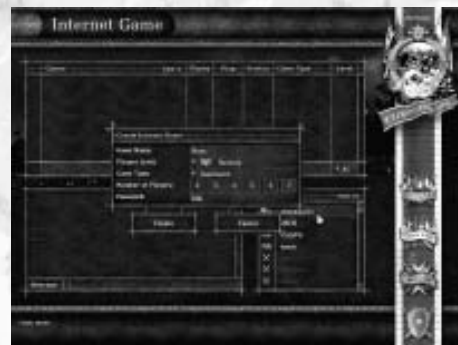
The ability to send messages is an important feature of the game. As soon as you reach the Internet Game menu, you can exchange messages with other players. You can also send personal messages to players (click on a player in the Players list, then type your message and press Enter). Moreover, you can send personal messages to players who are already playing.

There is a string of icons on the right:

- 1) Refresh – Click on this to update the list of servers;
- 2) Create Game – Click to create a game (find more information on game creation below);
- 3) Join Game – Click here to join a game;
- 4) Cancel – Click here to return to the main menu;

If you select Create Game, the following submenu will open:

This menu enables a player to enter the name of the game room, select the level of players he is willing to invite, and choose the game type and maximum number of players in the room. Players can also set passwords to restrict the access to their playing zones.



As soon as the game is created, you will reach the Multiplayer Options menu:



This allows you to select a nation, colour and set team. The Game Map and Victory Condition settings are also made in this menu. You can exchange messages with other players in the room. Besides, you may also click on the Chat icon to get back to the main chat room on the server. Clicking on the cracked shield in the lower right corner will take you back to the room you left.

For players joining the game:

If you want to join an existing game room, just highlight it in the Internet Game menu and click on the Join icon. You will thus enter the Multiplayer Options menu. Here you can select a nation and colour and set teams.

Once all players have adjusted their settings, they must click on the Start icon to show that they are ready for the game to launch. When all the players are ready, the host presses Start to launch the Internet game.

5. ON THE WAY TO WORLD DOMINATION

5.1 ECONOMIC DEVELOPMENT

The economic system employed in Cossacks is based upon two particularities.

The first is that you must spend resources in order to support the subjects of your state and to conduct military actions. That means that you have to possess resources not only to construct units but also to maintain them.

The second is that all resources are inexhaustible, with the exception of the food you receive from the land.

Resources are needed to support your subjects and to conduct military actions.

Food is required to maintain most types of units.

Gold is required to maintain elite troops, high-tech arms and mercenaries.

Shooting units, towers, artillery and ships require coal and iron to shoot.

Stone is required to maintain stone walls.

Wood is required to maintain paling.

What happens if you run out of resources needed to support your subjects and conduct military actions?

Note:

Always make sure you have enough food. If you run out of food, your units will gradually starve to death.

Note:

Always make sure you have enough gold. If you run out of gold, your troops will start rioting.

Note:

Always make sure you have enough coal and iron. If you run out of just one of these resources, your shooting units, towers, artillery and ships will no longer be able to shoot.

5.1.1 PEASANTS

Peasants are the most essential factor of your state economy. They mine resources, construct and repair structures and can fight shoulder to shoulder with your battle troops in case of danger. The more peasants you assign to mine resources and construct structures, the faster your state will develop.

Note:

Unguarded peasants can be captured by the enemy and later used by him to access structures and, eventually, gain advantages of your nation. Your peasants will fight only if there are troops nearby.

Creating a Peasant

1. Select the town hall.
2. On the interface screen you will see a peasant icon.
3. Left-click on the peasant icon. This way you will order one peasant. Resources will be deducted for every peasant you create. If you don't have enough resources, you will be unable to order more peasants and you will see that the peasant icon is grey.

Creating Several Peasants

1. Select the town hall.
2. On the interface screen you will see a peasant icon.
3. Left-click on the peasant icon multiple times. With every click you will order one peasant. A Shift + left-click combination can order as many as five peasants at a time. If you don't have enough resources, you will be unable to order more peasants and you will see that the peasant icon is grey.
4. Right-clicking on the peasant icon cancels the order for one peasant and the resources deducted for its construction will be returned. In a while, the newly created peasant will walk out of the town hall and stop nearby. Immediately instruct him to do a job. To make peasants automatically head for a mine to extract resources you will have to set a rally point. This will allow you to concentrate your attention on other tasks for the development of your state.

How can I see all my idle peasants?



In the course of the game some of your peasants may turn out to be idling around. Click on the "Select all idle peasants" button to see all the peasants that are currently out of work. They will be marked as white dots on your mini-map.

5.1.2 SETTING A RALLY POINT FOR UNITS

In order to save time you may set a rally point for units constructed in a given building. For example, for fighting units you can set a front line and for peasants you can set a place where they will mine resources. To set a rally point you must:

Select a structure where units are constructed.



While pressing CTRL, right-click on the point where all constructed units are to gather. You can also click on the Rally Point icon in the lower left-hand part of the interface and then click on the location on the map where you want the units to gather.

5.1.3 RESOURCES

The economic well-being of your state is dependent on six resources: food, stone, wood, iron, coal and gold. Resources are required to construct structures, to make up the army, to develop science and to get into the next technological epoch, as well as to support your subjects and conduct military actions. The amount of resources you possess can be seen in the upper part of the screen.

5.1.4 FOOD

All the units in your state require food. Always make sure you have enough food, for if you run out of it your units may starve to death. You must arrange a food supply first of all. Food can be obtained from the land or from the sea.

Procuring Food from the Land:

Construct a mill. The first time round the field will be sowed automatically. After the first harvest you will have to sow yourself. This is done by selecting the mill and afterwards clicking on the field icon that appears in the interface to sow again.

When the crop ripens you will have to send peasants to the field.

Peasants will bring gathered wheat to the mill.

Note:

Food on the field is not inexhaustible. Therefore remember to sow it again once the crops from most of the field have been gathered.

Note:

Send as many peasants to the fields as you can to gather more food.

Note:

You can increase the efficiency of food procurement through corresponding upgrades. At the beginning of the game you can upgrade the ways of grain treatment in the mill to make food procurement 140% more effective.

Procuring food from the sea:

You can collect food from the sea with the help of fishing boats. In order to fish you will have to:

Construct a shipyard. This will be possible as soon as you have built a market. Shipyards can be built only at the water's edge.

Select the shipyard and order fishing boats.

As soon as the fishing boats are constructed, they will begin fishing automatically.

Note:

Fish in the water are an inexhaustible food supply, so you can build more boats to get more food.

5.1.5 Wood

Wood is required to construct buildings, ships and artillery, as well as to research new technologies and make upgrades. Wood comes from the forest.

Wood procurement:

Construct a storehouse as close to the forest as possible.

Select peasants and right-click on the trees. Your peasants will now start to chop trees and bring the wood to the storehouse. If you fail to construct a storehouse or it is destroyed, peasants can bring the wood to the town hall.

Note:

Wood is an inexhaustible resource, thus sending more peasants to the forest will increase wood procurement.

Note:

You can increase the efficiency of wood procurement through corresponding upgrades.

5.1.6 STONE

Stone is required to construct buildings, ships and artillery, as well as to research new technologies and make upgrades. Stone comes from quarries.

Stone procurement:

Construct a storehouse as close to a quarry as possible.

Select a peasant and left-click with the mouse on the stone. Your peasants will now start to collect stone and bring it to the storehouse.

If you fail to construct a storehouse or it is destroyed, peasants can bring the stone to the town hall.

Note:

Stone is an inexhaustible resource, thus sending more peasants to the quarries will increase stone procurement.

Note:

You can increase the efficiency of stone procurement through corresponding upgrades.

5.1.7 IRON, COAL AND GOLD

Iron and coal are required for your rifles, cannon, ships and towers to fire. You will require a certain amount of iron and coal for each shot. Thorough military actions will result in a great loss of these resources. If you run out of any of them, your shooting units, artillery and towers

will be unable to fire and will become easy targets for enemy troops. Iron and coal are also required to research new technology, make upgrades and construct certain types of troops.

Gold is required to make upgrades, construct and maintain elite troops and high-tech arms as well as to hire mercenaries.

Iron, coal and gold are mined at deposits.

Iron, coal and gold mining:

1. Construct the mine on a deposit.
2. Select a peasant and left-click on the mine.
3. Once the peasants have entered a mine, they will start mining the resource.
4. Gold, iron and coal are inexhaustible resources, but the number of peasants who can work in a mine is not unlimited. Initially, only five peasants can work there.

You can increase the capacity of a mine through corresponding upgrades to do with the development of mine infrastructure.

Upgrading the mine infrastructure:

Select the mine and right-click on the upgrade icon which appears in the interface.

As soon as the upgrade is complete, the mine will have a bigger capacity. You can find out how many peasants can work in the mine in the lower left part of the screen when you select it.

Select the peasants and send them into the mine.

Increasing a mine's capacity will allow you to mine more coal, iron and gold. Six upgrades are available and once they have all been completed, ninety peasants will be able to work in a mine at the same time.

Note:

Mine infrastructure upgrades have to be carried out separately for each mine.

Note:

Guard your mines well or the enemy may capture them and benefit from them.

Note:

You can find out about the location of all the mines on the map by making the "Develop Geology" upgrade.

How can I see the mines that are working below capacity?

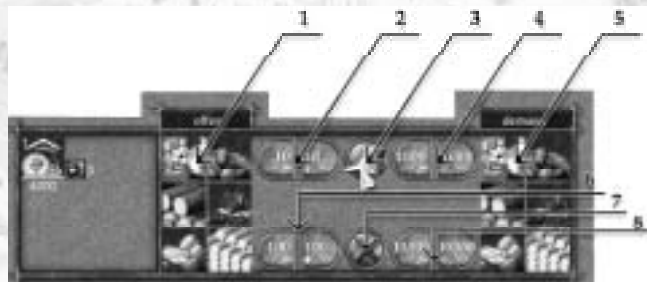


During the course of the game some of your mines may not be filled completely, which means they are not working at full capacity. Click on "Select all unoccupied mines" to see all mines with vacant spaces. It is recommended to fill all the mines up to their capacity.

5.2 TRADE

As soon as you construct a marketplace you can buy, sell or exchange resources. A distinguishing particularity of trade in Cossacks is that it employs a system which applies to all players. Prices change and are dependent on supply and demand. For example, if you sell much wood and buy much iron, the wood price will go down and the price of iron will go up. But the prices will change for your opponent too. Thus, not only the prices of resources are affected, but you may also indirectly influence your opponent's economy.

How to buy, sell and exchange resources:



Select the market.

In the "Demand" column (1), choose the resource you want to sell.

With the help of the number buttons (2) and (6), enter the amount of resources you want to sell. Using the "+" button you can increase the amount of resources and using the "-" button you can decrease the amount.

In the "Supply" column (5), choose the icon with the resource you want to buy.

You will see the possible amount needed for the resource you sell. Using buttons (4) and (8) you can acquire the quantity of resources you need.

If you are satisfied with the conditions of the transaction, click on "Exchange Resources" (3). Otherwise select "Cancel Bargain" (7).

5.3 CONSTRUCTING BUILDINGS

To construct a building or fortification you will need wood and stone and sometimes iron and gold. At the beginning of the game only certain structures will be available for construction. As soon as they have been built, you will be able to access new structures. You will find more information on the sequence of building construction under Technology Tree.

How to build structures:

1. Select peasants to see icons of the available structures in the lower left part of the screen.
2. Left-click on the icon you need.
3. You will see the cursor as a semi-transparent flashing structure. Move the cursor to choose the possible location for the structure. As you move it across the landscape, the structure will turn white to show that you can build there or red, which means you can't build there.
4. Having chosen the location for the structure right-click on it. A base for the corresponding structure will appear and the peasants will come up to it. It will take a while for the structure to be constructed.

You can build several identical structures, e.g. four towers or three barracks. But as the number of certain structures goes up the cost of each following building will follow suit.

Note:

It takes quite a long time to build certain structures. Always assign as many peasants as possible to a construction in order to speed up the building process.

Note:

All buildings which are not yet finished or unguarded can be captured by the enemy.

Note:

Selecting peasants and pressing Shift sets the construction sequence.

5.3.1 PALING, WALLS AND GATES

Paling and walls are intended to protect. You can construct defensive structures around your town, around certain objects, in narrow passages, etc. Building paling and walls will allow you to protect important objects and prevent sudden attacks from enemy infantry and cavalry units.

Stone walls are firm and can be destroyed only by cavalry, ships, towers, grenadiers and archers. But it takes a lot of time to construct them and much stone is required to maintain them. Shooting units, artillery and towers cannot shoot through stone walls.

Wooden paling is less firm; it can be destroyed by any enemy unit armed with a cold steel weapon. But it takes far less time to build it, requires a small quantity of wood to maintain it and your artillery units and towers can shoot through it.

Note:

In order to see whether there is any passage between the wall or paling and the landscape, press the "Q" key. This will let you see narrow passages, holes in the walls, etc.

Note:

Wall maintenance requires a lot of stone, which is why it is always wise to make sure you have a constant stone supply before you start building massive fortifications.

How to build paling and walls:

1. Select peasants. You will then see paling and wall icons in the lower left part of the screen. You will be able to access the paling and walls as soon as you have constructed a storehouse.
2. Click on the paling or wall icon and the cursor will turn into the semi-transparent paling or wall.
3. Click on the map in the place where you want the wall to start and fix its beginning. As you move the cursor, the semi-transparent wall will extend in the direction you move the cursor. Click on the map once again to fix the end of the wall. You can then move the cursor again to form another part of the wall. When the wall has the shape you need, double-click on the map in the place where you want the wall to finish and a foundation will appear along the perimeter. Once these actions have been performed, your peasants will start constructing.
4. You can cancel the wall construction by pressing ESC. If you try to build the wall or paling in a place where it is not possible, the flashing wall will appear in red.

Note:

Unfinished parts of the wall can be easily destroyed by the enemy.

When the paling or wall is complete you can build a gate in any section of the wall that includes three blocks facing in the same direction. The gate will allow you to freely move your units on the territory protected by the wall or paling.

5.3.2 BUILDING GATES

1. After the wall or paling has been completed, click on any straight section. To build a gate, at least three sections of the wall must be constructed in the same direction. As you click on the wall you will see the gate icon.
2. Click on the gate icon.
3. It will take a while to build the gates.



When the gate is finished you can click on it to see the icon for opening and closing the gates.



Note: Make sure the gates are closed, otherwise the enemy may break into the town and cause major damage.

5.3.3 TOWERS

A tower is a powerful defensive structure which can fight back numerous enemy troops due to its guns. Being made of stone, the tower can be destroyed only by enemy artillery, ships, grenadiers or archers.

Note:

A tower's shooting range can be increased by building it on a hill, for instance. Towers may fire in all directions but cannot shoot over hills, walls and buildings.

By default, the tower will shoot all enemy units within its shooting range. Be careful, for a tower in automatic mode can cause damage to your own troops as well.

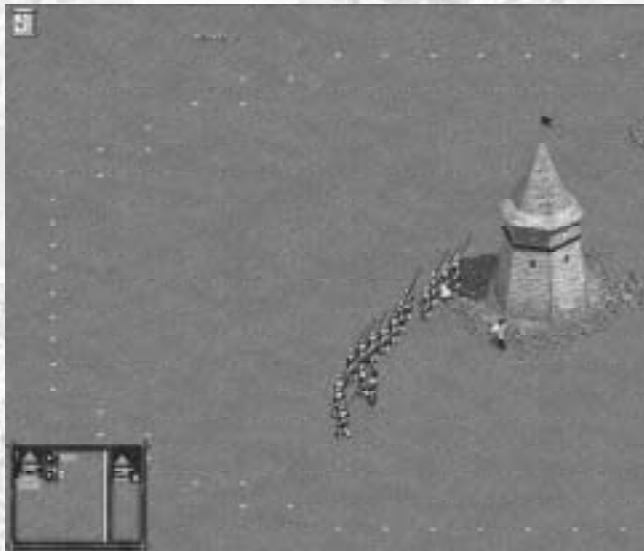
Note:

Towers require coal and iron to fire. If you run out of either of these resources, your towers will be unable to shoot.



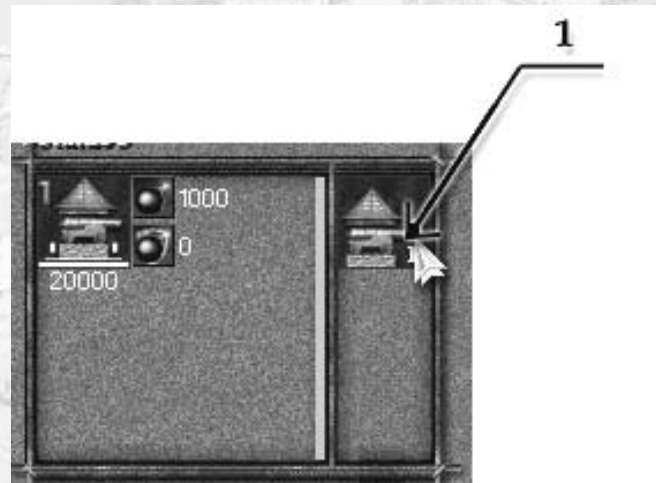
How do I find out my tower's shooting range?

You can find out how far a tower can shoot by selecting it to see white dots diverging from it. The largest radius will show how far your tower can shoot.



Increasing a tower's rate of fire

Once a tower is complete it has a relatively low rate of fire. It can, however, be upgraded to increase the rate of fire and make it more effective.



Upgrading towers' rate of fire:

1. When you select a tower you will see the upgrade icon (1) in the interface screen. You will be able to access the rate of fire upgrades as soon as you have constructed an artillery depot.
2. Left-click on the upgrade icon. As soon as the tower is upgraded, it will be able to shoot more often.

Note:

Each tower must be upgraded separately.

Note:

Until the upgrade is finished the unguarded tower can be captured by the enemy.

5.3.4 REPAIRING BUILDINGS, WALLS AND TOWERS

During military actions your structures, walls and towers can be damaged by enemy forces. You can repair them and even totally restore them. You can assess a structure's level of damage by looking at the HP indicator in the lower left part of the screen after you have selected the object.

Repairing buildings:

1. Select one or several peasants. Click on the damaged object for the peasants to repair it.

Note:

Assign as many peasants as you can to repair a building in order to speed up the process.

5.4 TECHNOLOGIES AND RESEARCH

Science is an equally important constituent part of your victory as a strong economy and army and strategic or tactical actions. Technological development gives you many advantages. Research and upgrades result in more effective resource procurement, better unit, artillery and ship parameters, stronger buildings and access to new troops and more powerful weapons. Technological advantages can not only become a turning point in the game, but possibly secure the victory for you.

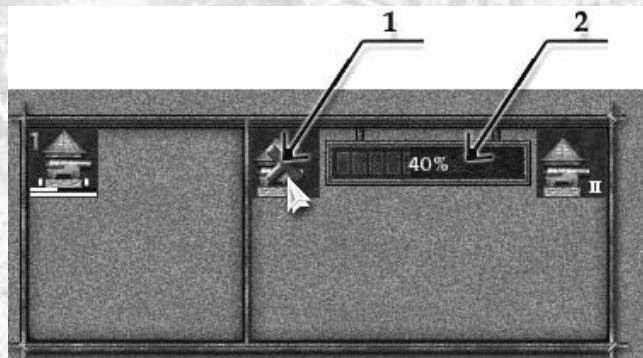
The tech tree in Cossacks includes about 300 upgrades divided into two epochs: the 17th and the 18th century.

5.4.1 UPGRADING

To carry out an upgrade you first need to select a building where an upgrade is possible. You will find upgrade icons in the lower left-hand part of the screen. Left-click on an upgrade icon. A progress bar will appear, indicating the percentage of the upgrade that has been completed.

Most upgrades can be carried out in the academy, the scientific centre of your town. You can also carry out upgrades in a blacksmith, mines, towers, 17th century barracks, 18th century barracks, stables and artillery depots.

5.4.2 CANCELLING AN UPGRADE



Once an upgrade has been started you can cancel it and retrieve the resources that have so far been spent on it. In order to cancel an upgrade, left-click on button (1).

5.4.3 PROGRESSING TO THE 18TH CENTURY



The tech tree in Cossacks is divided into two epochs - the 17th and the 18th century - in which you will be able to access basic buildings, troops and upgrades. On reaching a particular stage of development, your state will be able to progress to the next century and new buildings, troops, arms and technologies will be available.

Progressing to the next technological epoch

1. In order to progress to the 18th century you will have to build a town hall, a blacksmith, a storehouse, a mill, barracks, a market, stables, an academy, an artillery depot and a church.
2. Once all these buildings have been erected, select your town hall to find an 18th century transition icon in the lower left corner of your screen. Click on it if you possess enough resources. Continue left-clicking on the icon. As soon as you have enough resources your nation will progress to the 18th century.

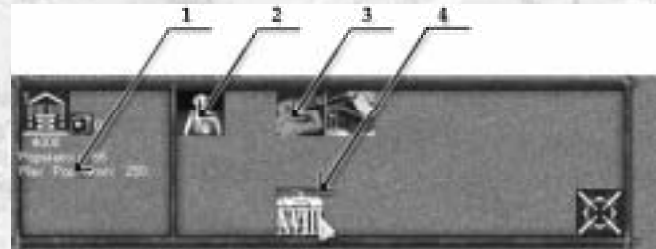
Note:

States such as the Ukraine, Turkey and Algeria will not be able to progress to a new technological epoch.

5.5 POPULATING YOUR STATE

In addition to the resources needed for maintenance, your subjects will require places of residence. Each unit takes up one habitation space. If you are short of dwellings, you will not be able to build new units. That is why it is wise to make sure you have vacant places for you subjects to live in.

5.5.1 WHERE CAN I SEE HOW MANY HABITATION SPACES AND UNITS I'VE GOT?



Select either the town hall, a dwelling, the 17th century barracks or the 18th century barracks. You will then see entries (1) in the lower left part of the screen. These denote the total amount of habitation spaces available and the number of units.

5.5.2 WHICH BUILDINGS WILL INCREASE THE NUMBER OF HABITATION SPACES?

The town hall adds 100 habitation spaces.

A dwelling adds 15 habitation spaces.

The 17th century barracks add 150 habitation spaces,

The 18th century barracks add 250 habitation spaces.

5.5.3 HOW DO I FIND OUT IF I'M SHORT OF DWELLINGS?



If you are short of accommodations you will see a house (1) flashing in the upper right corner of your game screen.

5.5.4 UNIT LIMIT

The game can support up to 8,000 units simultaneously. This means that, if two players are in the game, they will each be able to build a maximum of 4,000 units. If there are four players, each of them is left with a limit of 2,000 units. When you reach the unit limit, the corresponding message will pop up in the lower left corner of your game screen.

5.6 RAISING AN ARMY

Each type of troops, i.e. infantry, cavalry, artillery and ships, is built in a particular structure. Thus, infantry units are built in barracks of the 17th or 18th century, cavalry in stables, artillery in the artillery depot and ships in a shipyard. You can build units in any order you like. For example, you can order five pikemen in the 17th century barracks, three cannons in the artillery depot and six dragoons in a stable. Units will leave the corresponding structures as soon as they are built. You can also order various different units from the same structure. For example, you can order four roundshiers and two pikemen the Barracks. Units will be built in the sequence you ordered them. When you order several units, the resources required for their creation are deducted instantly. When you cancel a unit's construction, the resources that have so far been spent on its creation are given back.

5.6.1 INFANTRY

As soon as you have constructed the 17th century barracks, you will be able to build infantrymen of that epoch. To build infantrymen of the 17th century, you will have to:

1. Select the barracks to see icons for 17th century infantrymen in the interface.
2. Left-click once on the icon to order one unit or several times to order several units. Pressing Shift and clicking on the icon will allow you to order five units at a time. Right-click on the icon to cancel the order for one unit. When it is finished, the unit will appear and stop near the barracks.

After the transition into the 18th century you will be able to construct a new building, the 18th century barracks. Constructing the 18th century barracks and selecting it you will see icons for new infantry units of the 18th century.

Note:

You can set a rally point for units that are under construction. Setting a rally point is described in the above section "Setting a Rally Point for Units".

Note:

Train your infantrymen and make all the required upgrades to improve your units' parameters and to make them stronger. The process of training your units is described in chapter 5.6.6.

Note:

You can organize your infantrymen into formations that will give them a bonus and tactical advantages. Detailed information on formations is available in section 5.7.2.

5.6.2 CAVALRY

As soon as you have constructed a stable you can build mounted units of the 17th century. To build mounted units you will have to:

1. Select the stable to see icons of the mounted units that you can build in the interface screen.
2. Left-click once on the icon to order one unit or several times to order several units. Pressing Shift and clicking on the icon will allow you to order five units at a time. Right-click on the icon to cancel the order for one unit. When it is finished, the unit will appear and stop near the stable.

After the transition into the 18th century you will be able to access new mounted units in the stable.

Note:

You can set a rally point for units that are under construction. Setting a rally point is described in the above section "Setting a Rally Point for Units".

Note:

In order to increase the speed of cavalry creation, make all the required upgrades. Once the upgrades have been completed, cavalry units will be built four times faster.

Note:

Train your cavalrymen and make all the required upgrades to improve your units' parameters and to make them stronger. The process of training your units is described in chapter 5.6.6.

5.6.3 MERCENARIES

Once you have constructed a diplomatic centre you can recruit mercenaries from other states. Recruiting mercenaries is always more expensive than raising a national army, but it takes very little time to build them and you can assemble a large army in a very short space of time.

To recruit a mercenary you must:

1. Select the diplomatic centre to see icons of the mercenaries you can recruit in the lower left-hand part of the screen.
2. Left-click on a mercenary icon to make a unit come out of the diplomatic centre.

5.6.4 ARTILLERY

When you have constructed an artillery depot, you will be able to create cannons, mortars and howitzers. To build artillery you must:

1. Select the artillery depot to see icons of the cannon, mortars and howitzers that you can build in the interface screen.
2. Left-click once on the icon to order one weapon and several times to order several weapons. Pressing Shift and clicking on the icon will allow you to order five weapons at a time. Right-click on the icon to cancel the order for one weapon. When it is finished, your new weapon will appear and stop near the artillery depot.

Note:

In order to increase the building speed for cannons and howitzers and to lessen their cost, make all the required upgrades.

Note:

You can set a rally point for weapons that are under construction. Setting a rally point is described in the above section "Setting a Rally Point for Units".

Note:

You can organize your artillery into batteries, which will give you tactical advantages. Detailed information is available in section 5.7.3.

5.6.5 SHIPS

When you have constructed a shipyard, you can build fishing boats. As soon as you have a blacksmith and an artillery depot, you will be able to access battle ships in the shipyard. To build battle ships you must:

1. Select the shipyard to see icons of the ships you can build in the interface screen.
2. Left-click once on the icon to order one ship and several times to order several ships. Pressing Shift and clicking on the icon will allow you to order five ships at a time. Right-click on the icon to cancel the order for one ship. The ship will soon be built.

Note:

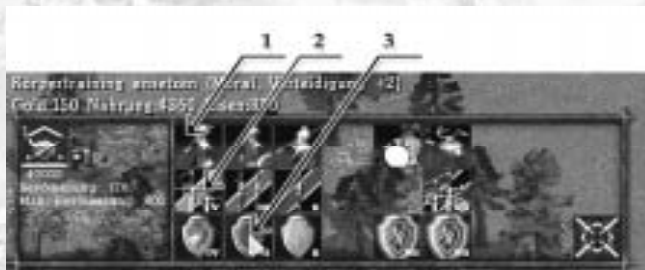
There are some technologies which will speed up shipbuilding, others make your ships stronger and faster.

Note:

You can set a rally point for ships that are under construction. Rally points for ships must be located on water. Setting a rally point is described in the above section "Setting a Rally Point for Units".

5.6.6 TRAINING INFANTRY AND CAVALRYMEN

When you have constructed the barracks of the 17th and 18th centuries, units that you can build there will possess only minimal parameters. They can be trained, however, to improve their characteristics and turn them into professionals.



1. Select the structure where the unit is created, for example the 17th century barracks. The interface screen will show you unit icons with attack and defence training icons beneath them.
2. Left-click on the attack training icon (2) or the defence training icon (3). Shortly all your units will be trained and their attack and defence parameters improved.

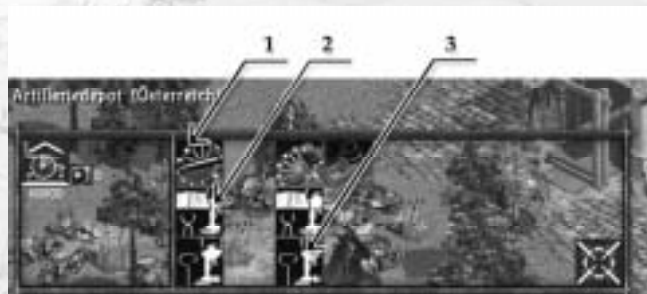
Different units have a different number of attack and defence upgrades available. This number usually varies from 1 to 6. It is recommended to train your troops the best you can.

Note:

It makes no sense to carry out an upgrade for each individual unit. It is far better to choose one or several units to be the main force of your army and train them as best you can.

5.6.7 CHEAPER CANNON AND HOWITZERS AND A FASTER CONSTRUCTION PROCESS

The technologies of the 17th and 18th centuries didn't allow fast and productive cannon and howitzer construction. However, being very effective, cannon and howitzers remained vital for many national armies and rulers allocated large funds to the development of the required technologies.



Upgrading Cannon and Howitzers

1. Select the artillery depot to see upgrade icons below the gun icons in the lower left part of the screen.
2. Left-click on the upgrade icon (2) or (3). The upgrade will take a while to complete.

Note:

Carry upgrades out so that cannon and howitzers can be built as cheaply and as fast as possible.

5.6.8 OTHER UPGRADES TO IMPROVE UNIT PARAMETERS

Each battle unit is characterized by parameters such as cost, hit points, defence, range of fire, accuracy, speed and others that make up the unit's main advantages and shortcomings. Upgrades allow you to improve most of these parameters. For example, you can speed up cavalry and artillery construction, make shooting unit construction cheaper, increase your artillery's accuracy, etc. Information on parameters can be obtained in the lower left part of the screen when you select a unit.

Most upgrades are available in the academy and blacksmith. Detailed information on the upgrades can be found under "Technologies and Upgrades".

5.6.9 DELETING UNITS AND BUILDINGS

You can delete any of your units or buildings. For example, if you see that your cannon or peasants are sure to get captured and you do not want the enemy to have them, you can delete them. If you delete your units or structures, you will not get the resources you initially spent on them back.

Select a unit or structure and press the "Del" key to delete it.

Note:

If you delete a building, it will blow up and the debris might damage units standing close by.

5.7 COMBAT ACTIONS

Combat actions are central to the game. Only your talent as a military leader will lead to victory and, in the long run, enable you to beat your opponents.

Every state possesses a unique balance with unique units and arms. That is why, when choosing a certain state, you will receive a number of advantages in a campaign against other nations.

Each state's armed forces are divided into infantry, cavalry, artillery and the fleet. Every type of unit possesses a set of parameters that determine its advantages and shortcomings and the best way it can be used.

The basic principles of military actions are similar to the principles of RTS games, i.e. players have to accumulate forces and fight opponents, though there are a number of differences. For the most part, military actions are mainly influenced by game features such as a 3D landscape, iron and coal expenditure for shooting units, artillery, towers and ships, and unit formations.

Note:

Always make sure you have enough food, otherwise your units will starve to death. Make sure you have enough gold to maintain mercenaries and some other kinds of units, otherwise they might rebel and start fighting against you.

Note:

Always make sure you have enough iron and coal for your shooting units, artillery, towers and ships. If you run out of either of these resources, all your shooting units, artillery, towers and ships will be unable to fire.

5.7.1 COMBAT ACTIONS INFLUENCED BY LANDSCAPE

As in real life, the 3D landscape is an important part of any battle in Cossacks. Thus, towers, artillery and shooting units located on a hill have a further range of fire, enemies can be contained in narrow canyons, etc. The 3D landscape greatly affects game tactics.

Cannon, ships and shooting units cannot shoot across irregularities in the landscape.

Note:

Remember that, while located on top of a hill, shooting units, artillery and towers have a further range of fire. Do your best to place such units, particularly artillery and towers, on the highlands, which will give you great advantages.

Note:

Cannon, shooting units and towers cannot shoot across landscape irregularities. Only howitzers and mortars can fire over hills and mountains.

5.7.2 MILITARY FORMATIONS

You can group your infantry units in military formations such as rank, column or square. Units in formations will receive an additional bonus on attack and defence parameters, which automatically makes them stronger than the same number of unorganised units. Also, each type of formation possesses a number of tactical advantages.

Rank

Soldiers assume a wide front line position. This kind of formation is an excellent way to defend territories and contain light cavalry. However, such a formation can easily be destroyed from the rear or the flanks.

Column

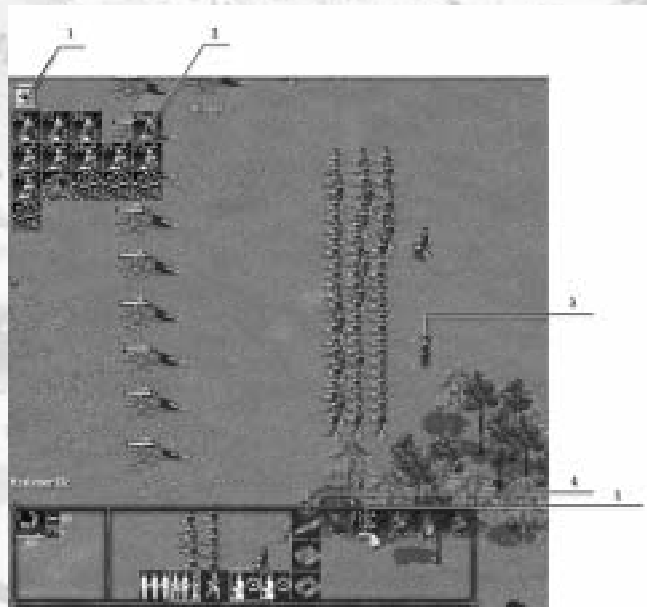
Soldiers stand tightly grouped. This formation is a perfect way to attack or break through the ranks. It doesn't take much time to regroup and units are protected from rear and flank attacks. However, this formation can easily be destroyed by enemy artillery.

Square

Soldiers stand along a square perimeter. Shooting units are most effective in this formation. The main advantage of the Square formation is that soldiers can resist attacks or carry out attacks of their own in any direction. This formation is efficient for defence as well as assault.

An absolute condition for assuming a formation is the presence of an officer and a drummer. Only a certain number of infantrymen can be organized into formations. Thus, a rank formation can consist of 15, 36, 72, 96, 120 or 196 soldiers, while column or square formations can consist of 36, 72, 96, 120 or 196 soldiers.

Arranging a Formation (Example: Pikemen)



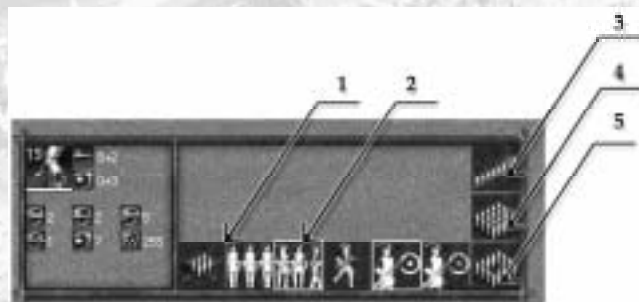
1. Create 36 pikemen in the 17th century barracks.
2. Build one 17th century officer and one 17th century drummer in the 17th century barracks.
3. Gather the pikemen, the officer and the drummer in the same place.

4. Select the officer (3) to see icons for different formations (4) in the interface screen.
5. Left-click on the icon of the formation you want your troops to assume. Semi-transparent icons (5) of the units will appear near the formation icon. Only the pikemen icon will not be transparent.
6. Click on the pikemen icon to organize them into a formation.

Note:

Should you have 35 pikemen, you will not be able to organize them into a formation. If you have 37 pikemen, 36 of them will assume the formation and one will be left over.

Rearranging a Formation



After you have organized the column, for example, you can rearrange it into any other formation by doing the following:

1. Select the formation you want to rearrange.
2. In the lower left part of the screen, click on the icon of the formation - (3), (4), (5) - you want your troops to assume.

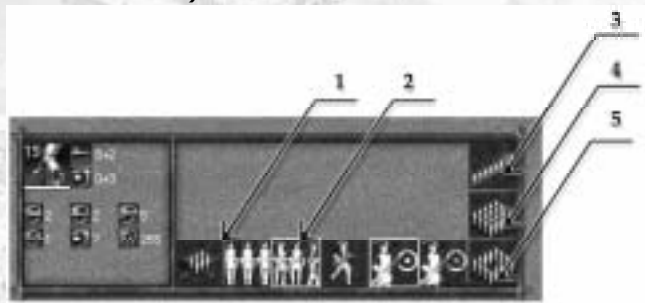
Note:

You will not be able to rearrange the formation if it is missing even one unit.

When will my formation fall apart?

The formation will disintegrate if it loses 60% of its personnel.

How to dismiss your formation:



In order to disband a formation you will have to:

1. Select the formation.
2. Click on the icon to dismiss the formation (1).

5.7.3 GUN BATTERIES

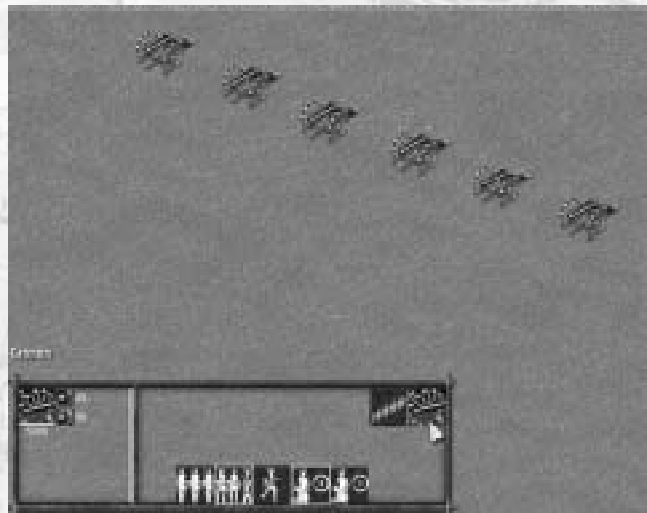
You can organize cannon, mortars, howitzers and multi-barrelled cannon into batteries. No less than 3 guns can make up a battery.

A battery consisting of 3 to 11 guns is gathered into a line.

A battery consisting of 12 to 40 guns is gathered into a tight group.

A battery consisting of 100 guns is also gathered into a tight group.

No bonuses are given for organized batteries.



To assemble a battery:

1. Build three cannons.
2. Lead them together.

3. Select one of the cannons to see a battery organization icon in the interface screen.
4. Click on the icon to organize the cannons into a battery.

To dismiss a battery:

1. Select the battery to see a dismissal icon in the interface screen.
2. Click on the icon to dismiss the battery.

5.7.4 ORGANIZING SIMPLE FORMATIONS INTO COMPLICATED ONES

You can use simple formations or groups of units to organize them into more complicated formations. First place your units in the required formation. Now control the selected battle formation as if it were a single battle unit. Various combinations of formations and groups of units will give you additional tactical advantages.

5.7.5 CAPTURING UNGUARDED PEASANTS, MINES, ARTILLERY AND STRUCTURES

Unguarded peasants, mines, cannon, mortars, howitzers, and multi-barrelled cannon can be captured by the enemy and be used to his advantage. For example, if you capture peasants from another state, you will be able to construct basic structures belonging to that state and including its unique advantages.

If a player enters an enemy town, he can capture and set fire to a number of unguarded structures. A burning structure will lose most of its life and soon burn down. You will, however, have a certain amount of time to regain control over your building and repair it.

These particularities make partisan warfare very important to the game. A single partisan sally can often be more successful than several victorious battles. Don't miss your chance to get even with your opponent by capturing his peasants, mines and guns, burning his towns and generally ruining his economy.

Note:

Make sure not to leave your important structures unguarded. Try to place guards near every building and unit that can be captured.

Note:

Fast cavalry units are most suitable for partisan sallies.

5.7.6 HEALING UNITS

In battles, units might suffer damage which lessens their HP. A unit perishes if it has 0 HP left. Nevertheless, you can heal your troops as well as repair your artillery.

Healing All Units



In order to heal all units, select the academy and click on the icon to heal all units. This will take up some of your resources. If you have sufficient resources, all your units will be healed and their life restored by 10%.

Healing Individual Units

Priests can heal the units that stand close to them. If you want a priest to heal, move him close to the damaged units and he will begin treating them. The priest restores 5 to 10 HP per unit of time to each unit.

Note:

Healing units in this manner will prove very effective if you include several priests in your squads. Even as a squad is fighting, the priests will heal units and restore their lives, thus making your fighting force more efficient.

Repairing Artillery



Damaged artillery can be repaired. In order to repair damaged artillery units, select the academy and click on the artillery repair icon. This will take up some of your resources. If you possess the required resources, all your artillery will have 10% of their HP restored.





An aerial photograph of a city, likely New York City, showing a dense grid of buildings and streets. The image has a torn paper effect, with the edges of the city view appearing ragged and layered. The title text is centered over the middle of the image.

TECHNOLOGIES AND UPGRADES

RESOURCE EXTRACTION

IMPROVE GRAIN CROPS TREATMENT



Location?	Mill
Action?	Improving the treatment of grain crops allows peasants to supply 140% more food at once. For instance, after accomplishing this upgrade peasants will supply not 30 units of food but 72 at a time, thus increasing food procurement.

Over a long period of time people worked to improve methods of harvesting and treating grain crops. Various facilities for threshing and grinding were developed to avoid losses when treating cereals.

IMPROVE GRAIN CROPS STORAGE



Location?	Mill
Availability?	Becomes available after advancing to the 18th century.
Action?	Improving the grain crops storage allows peasants to bring 120% more food to the mill. For instance, after accomplishing this upgrade peasants will supply not 30 units of food but 66 at a time, thus increasing food procurement.

Safe storage of the harvest was of great importance in state economics and for army supplies. Inadequate storage conditions or a polluted environment could result in losing a harvest and would have disastrous effects upon a city or a detachment. Building new granaries and improving storage conditions allowed crops to be preserved for a long time.

CULTIVATE NEW CULTURES OF WHEAT



Location?	Academy
Action?	Cultivating new cultures of wheat allows peasants to harvest food 20% faster. Accomplishing this research will greatly increase food procurement.

Villagers often found that some cultures of wheat matured earlier or later and yielded better or worse harvests than others. Based on these observations, peasants tried to spread fields with better quality wheat in order to obtain greater yields.

CULTIVATE NEW CULTURES OF RYE



Location?	Academy
Action?	Cultivating new cultures of rye allows peasants to harvest food 15% faster. Accomplishing this research will greatly increase food procurement.

Thanks to the development of seafaring in the 17th and 18th centuries, new cultures such as, for example, potatoes were introduced in the Old World countries. They yielded better harvests and increased people's food supplies. As a result, military food supplies were also significantly improved.



RAISE AGRICULTURISTS' SALARY



Location?	Academy
Action?	Raising the agriculturists' salary allows peasants to harvest food 10% faster. Accomplishing this research will greatly increase food procurement.

Landlords who owned large farms in the 17th and 18th centuries often hired experienced specialists - agriculturists - to organize labour in the fields. In their everyday work, agriculturists made use of science and practical farming experience from various regions in order to improve harvesting. Quite often landowners sent their agriculturists to academies and paid for their education, knowing that they would benefit from their knowledge.

CARRY OUT FIELD MELIORATION



Location?	Academy
Action?	Carrying out field melioration allows you to have an infinite stock of food in the field. After accomplishing this upgrade, fields will no longer disappear and will therefore not need to be sown again.

To carry out field melioration, agriculturists irrigated dry soil or drained swamps in order to obtain ideal conditions for growing certain crops. The melioration enabled them to achieve better yields from their fields.



MANUFACTURE AGRICULTURAL EQUIPMENT



Location?	Blacksmith
Action?	Manufacturing agricultural equipment allows twice as much food to be procured from the fields. For instance, if 2,000 units of food can be harvested from one field section, peasants can procure 4,000 units of food from the same section after the upgrade.

Land cultivation required multiple farm implements to be manufactured and repaired in smithies. Assigning additional means to the production of instruments of labour for peasants allowed the improvement of farming efficiency.

DESIGN NEW TACKLE AND FISHING NETS



Location?	Academy
Availability?	Becomes available after building a shipyard.
Action?	Designing new tackle and fishing nets allows you to increase the efficiency of fishing boats by 100%. After accomplishing this upgrade, boats will fish twice as fast, thus increasing food procurement.

Fishing was a bread-and-butter business for seafaring nations. In order to increase its efficiency, they often made efforts to improve and design new tackle and nets.

BUILD NEW SHIPYARDS FOR FISHING BOATS



Location?	Academy
Availability?	Becomes available after building a shipyard.
Action?	After accomplishing this upgrade, building a boat will cost 85% less.

Primitive boat construction methods were ineffective and expensive. Building fishing boats at shipyards enabled a reduction in prices and the increase of fish procurement.

DESIGN NEW WOODWORKING TOOLS



Location?	Academy
Action?	Designing new woodworking tools allows you to increase wood extraction efficiency by 100%. After accomplishing this upgrade, peasants will procure wood twice as fast, thus increasing wood extraction.

Wood was one of the main construction materials in the 17th and 18th centuries, so woodworking methods were continuously improved. For instance, more precise lathes and large saw benches were designed for sawing frames and manufacturing planks.

DEVELOP MINING



Location?	Academy
Action?	Developing mining allows you to increase the stone extraction efficiency by 200%. After accomplishing this upgrade, peasants will procure stone three times as fast, thus increasing stone extraction.

In order to intensify ore extraction, new tools and extraction methods were introduced in the 17th and 18th centuries. Miners used tubs and various lifting devices. When it was impossible to extract minerals from an open pit, they built mines. Pumps were used to pump out water. These innovations significantly increased miners' productivity.

RAISE MINERS' SALARY



Location?	Academy
Action?	Raising the miners' salary allows you to increase the stone extraction efficiency by 400%. After accomplishing this upgrade, peasants will procure stone five times as fast, thus increasing stone extraction.

Concern for workers, their education and their standard of living contributed to labour efficiency. It often led to a significant increase in extraction.

ENLARGE MINES AND EXTENSIVE RAILROAD NETWORK FOR THEM (LEVEL 2, 3, 4)



Location?	Mine
Action?	Initially each mine can host only 5 peasants. After accomplishing this upgrade (levels 2/3/4), you will be able to send more peasants to the mine (+5/+8/+10 workers, a total of 10/18/28 workers respectively) and increase the extraction of this specific deposit. Enlarge and build extensive railroad networks in each particular mine to upgrade it.



ENLARGE MINES AND BUILD EXTENSIVE RAILROAD NETWORK FOR THEM (LEVEL 5, 6, 7)



Location?	Mine
Availability?	Becomes available after advancing to the 18th century.
Action?	After accomplishing this upgrade (levels 5/6/7), you will be able to send more peasants to the mine (+12/+15/+40 workers, a total of 40/55/95 workers respectively) and increase the extraction of this specific deposit. Enlarge and build extensive railroad networks in each particular mine to upgrade it.

In order to extract more minerals, mines were often enlarged and new galleries dug. The construction of mine railroads, the introduction of tubs and the creation of ventilation shafts allowed workers' labour to be employed more efficiently and ore to be extracted faster.

DEVELOP GEOLOGY



Location?	Academy
Action?	After developing geology you will see all the deposits marked on the mini-map.

It was impossible to institute efficiently searches for new deposits without developing geology. Geology experts conducted research and observations, stored knowledge and exchanged experience. Thanks to their efforts, searches for new deposits became much more effective.

UNIT CREATION

RAISE BUILDERS' SALARY



Location?	Academy
Action?	Raising the builders' salary allows you to construct buildings and fortifications 75% faster. After accomplishing this upgrade, peasants will build any structure 75% faster.

Incentive wages stimulated workers to increase productivity. As a result, many tasks were accomplished much faster.

USE NEW CONSTRUCTION MATERIALS



Location?	Academy
Action?	Using new construction materials allows you to increase the durability of your structures by 85%. After accomplishing this upgrade, buildings have 85% added to their HP, thus it appears harder to demolish them. This upgrade does not affect walls or towers.

The development of architecture promoted the creation of new construction materials that allowed strong and majestic structures to be erected, which were much more durable and lasting. Some masterpieces of this architecture are still standing today.



RESEARCH NEW FORTIFICATION TYPES



Location?	Academy
Action?	Researching new fortification types allows you to increase the durability of walls and towers by 80%. After accomplishing this upgrade, walls and towers have 80% added to their HP, thus it appears harder to demolish them. This upgrade does not affect buildings.

The rapid development of artillery resulted in a revolution of fortification. Old walls and towers could not withstand artillery fire. Ultimately it was necessary to revise the principles of fortification. Walls were made much thicker; towers became larger and lower, on a level with the wall. Then traditional towers were replaced by round towers or bastions. Casemates inside them took over the part of the defunct overhangs on the walls - shooters fired on the enemy below through the holes in the casemate floor. Ditches and ramparts gained new meanings. A rampart protected the foot and the major part of a wall from cannonballs. However, there was a blind space in front of a tower built in the new style because it was round; thus these towers soon gave way to pentagonal bastions. A wall between bastions was called a curtain. To provide additional defences, further fortifications were placed in front of curtains.

FORGE METAL ARMATURE AND GRATINGS



Location?	Blacksmith
Action?	Forging metal armature and gratings allows you to increase structure defences by 50 points. After accomplishing this upgrade, the defence parameters of all structures will be increased by 50 points, thus damage caused by artillery, grenadiers or archers will be less.

In the 17th century, various items of metal were extensively used in structure building. Forging gratings, armature and staples was very labour-intensive and required additional means.

VESSELS

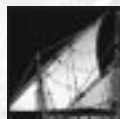
TRAIN CARPENTERS



Location?	Academy
Availability?	Becomes available after building a shipyard.
Action?	Training carpenters allows you to speed up vessel construction ten times. After accomplishing this upgrade, your ships will be built ten times faster than before.

In time, the complexity of manufactured objects increased and necessitated the improvement of production workers' level of education. Quite often hired workmen were taught the peculiarities of their profession in order to make them operate faster and better.

DESIGN NEW RIGGING TYPES



Location?	Academy
Availability?	Becomes available after building a shipyard.
Action?	Designing new rigging types allows vessels to move 40% faster. After researching this technology, your ships will speed up by 40% and gain the advantage of being able to overtake an enemy or escape when chased.

The period from the 17th to the 18th century is often called the Golden Age of the sailing fleet. It was the time when people invented perfect sailing vessels capable of withstanding storms and covering long

distances. Rigging developed and tested in the 17th and 18th centuries has remained almost unchanged to the present day.

DEVELOP NEW WOODWORKING METHODS



Location?	Academy
Availability?	Becomes available after building a shipyard.
Action?	Developing new woodworking methods allows you to build frigates. After researching this technology, you will be able to construct frigates in your shipyards.

Some parts of heavy sea vessels were so large or complex that old woodworking methods could not aid in shipbuilding. This stimulated the development and improvement of woodworking.

DESIGN NEW RIB SYSTEM AND NEW HULLS



Location?	Academy
Availability?	Becomes available after building a shipyard.
Action?	Designing a new rib system and new hulls allows you to build battleships. After researching this technology, you will be able to construct battleships in your shipyards.

In the heyday of the sailing fleet, the production of wooden hulls achieved perfection. Knowledge stored by carpenters and engineers when building new ships allowed them to construct hulls for the great battleships, the highlight of shipbuilding. Many concepts developed for the building of sailing vessels not only survived up to the epoch of metal ships but were also used in metal shipbuilding.

INFANTRY AND CAVALRY

IMPROVE FIREARMS: RIFLED BARREL



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Designing rifled barrels increases the damage caused by shooting units by 10%. After researching this technology, your shooting units will cause 10% more damage to an enemy. This technology does not affect artillery.

Firearms were developed and improved rapidly in the 17th and 18th centuries. Thanks to inventions in this field, firearms became lighter and more effective and gained better accuracy and a larger range of fire. Rifled handguns known as carbines were added to the arsenals. These firearms possessed a far greater range of fire. Large-calibre buckshot handguns called blunderbusses were effective at short range.

RESEARCH GRANULAR GUNPOWDER



Location?	Academy
Availability?	Becomes available after building a blacksmith.
Action?	Researching granular gunpowder increases the damage caused by shooting units by 15%. After researching this technology, your shooting units will cause 15% more damage to an enemy. This technology does not affect artillery.

The development of firearms proceeded not only the path of design improvement, but also of powder perfection. Initially firearms were loaded with regular gunpowder. Later scientists discovered that granular

powder combustion is much more efficient than that of regular gunpowder. The introduction of this invention improved the power of a bullet and increased the range of fire.

RESEARCH NEW SULFUR RECTIFICATION METHODS



Location?	Academy
Availability?	Becomes available after building a blacksmith.
Action?	Researching new sulfur rectification methods increases the damage caused by shooting units by 20%. After researching this technology, your shooting units will cause 20% more damage to an enemy. This technology does not affect artillery.

The low effectiveness of early firearms was partly due to detrimental impurities. In time, the progress of chemistry reduced the percentage of impurities in one of the powder ingredients - sulfur - and thus improved gunpowder combustion efficiency.

RESEARCH NEW NITRE RECTIFICATION METHODS



Location?	Academy
Availability?	Becomes available after building a blacksmith.
Action?	Researching new nitre rectification methods increases the damage caused by shooting units by 30%. After researching this technology, your shooting units will cause 30% more damage to an enemy. This technology does not affect artillery.

The low effectiveness of early firearms was partly due to detrimental impurities. In time, the progress of chemistry reduced the percentage of impurities in one of the powder ingredients - nitre - and thus improved gunpowder combustion efficiency.

DESIGN WHEEL LOCK



Location?	Academy
Action?	Designing a wheel lock for handguns increases the rate of fire by 35%. After researching this technology, your shooting units will fire 35% faster, which will make them more effective in battle. This technology does not affect artillery.

The invention of the wheel lock allowed the production of handguns and pistols that required no fuse and ignited powder automatically. The ignition was caused via friction of a flint against a revolving wheel. This type of gunlock was of limited use on account of the high cost.



DESIGN PAPER CARTRIDGE AND IRON RAMROD



Location?	Academy
Action?	Designing paper cartridges and iron ramrods increases the rate of fire by 35%. After researching this technology, your shooting units will fire 35% faster, which will make them more effective in battle. This technology does not affect artillery.

The introduction of the paper cartridge increased the rate of musket fire significantly. Before this invention, shooters had to fill the barrel with gunpowder from a tube, then flatten and cork it with a wad and put a bullet into the barrel. All these operations took up too much time and the rate of fire was low. Once the paper cartridge had been introduced, a marksman had only to put a ready-made cartridge into the barrel, which made the reload time much shorter.

DESIGN FLINTLOCK



Location?	Academy
Action?	Designing a flintlock for handguns decreases the cost for musketeers by half. After researching this technology, creating a musketeer will cost you half of what it used to.

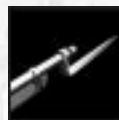
The invention of the flintlock was a truly revolutionary event. Not only did it increase the rate of fire significantly, but it also made handguns cheap enough to supply an entire army with them. After this invention, all armies were equipped with new weapons that were produced until the early 19th century when a new type of gunlock was invented.

CONDUCT A PRACTICE SHOOT



Location?	17th Century Barracks, 18th Century Barracks, Stable
Action?	A practice shoot allows you to increase the damage caused by your shooting units. Practice shoots should be conducted for each specific unit type to improve its characteristics.

DESIGN BAYONET: BARREL-INSERTED, BAYONET WITH A TUBE



Location?	Academy
Availability?	Becomes available after building a blacksmith.
Action?	Designing a bayonet allows you to increase the damage caused by your units by 7 points. After researching this technology, units that wield cold steel weapons will have 7 points added to their attack parameter.

At the end of the 17th century, infantry weapons underwent multiple changes which had a great impact on the structure of infantry detachments. The introduction of barrel-inserted and tube-mounted bayonets allowed pikemen to be abolished entirely. The bayonet was invented in France in the 1640s and was added to the armouries in 1699, after having been much improved. Pikes disappeared from the armies and soon after all types of armour were abolished.

RESEARCH NEW STEEL GRADES



Location?	Academy
Availability?	Becomes available after building a blacksmith.
Action?	Researching new steel grades allows you to increase the bayonet thrust efficiency of grenadiers by 25%. After researching this technology, your grenadiers will cause 25% more damage in hand-to-hand fighting.

Metallurgy was actively developed during the 17th and 18th centuries. New steel grades were invented in order to improve weaponry. At the same time, metalworking methods were perfected. As a result, cold steel weapons became more effective and less expensive.

RESEARCH IMPROVED STEEL GRADES FOR CUIRASSES



Location?	Academy
Availability?	Becomes available after building a blacksmith.
Action?	Researching improved steel grades for cuirasses allows you to increase armoured soldiers' defence by 2 points. After researching this technology, your armoured soldiers will have 2 points added to their armour.

At the close of the 17th century, cavalry armour was fundamentally changed. It became smaller, had no bracers or leg-guards and sometimes did not even cover the back. Owing to its smaller size, the armour's thickness was increased. This fact, along with the use of more durable steel grades, allowed bullets and cold steel to be repelled with greater efficiency.

FORGE HARNESSES FOR HORSES



Location?	Blacksmith
Action?	Forging harnesses for horses allows cavalry creation time to be quartered. After accomplishing this upgrade, your cavalry units will be created four times as fast as before.

Additional assignments to harness making allowed this manufacture to be expanded and provided cavalymen with high-grade equipment in a short space of time. Many smiths specialized in making harnesses and horseshoes. Cavalry maintenance was unthinkable without harness production.

FORGE BAYONETS AND INFANTRY BROADSWORDS



Location?	Blacksmith
Action?	Forging bayonets and broadswords for infantry allows you to increase the attack parameters of musketeers and grenadiers by 5 points. After accomplishing this upgrade, your 18th century musketeers and grenadiers will have 5 points added to their cold steel attack parameter.

Special purpose manufacture was often organized in order to generate supplies for military forces, forge new cold steel weapons and repair old ones. Smiths were well trained and possessed many secrets of cold steel forging. Special instruments and facilities were at their disposal and helped to make smiths' labour much more effective.



FORGE NEW TYPES OF BROADSWORDS AND SABRES



Location?	Blacksmith
Action?	Forging new types of broadswords and sabres allows you to increase the attack parameter of cavalry units by 5 points. After accomplishing this upgrade, all your cavalymen will have 5 points added to their cold steel attack parameter.

High-quality cold steel forging was always considered a real challenge. This was an art mastered by only a few very well trained smiths. The secrets of this trade were passed from father to son. However, without organizing specialized weaponry production, equipping cavalry with the latest in cold steel weapons was impossible.

FORGE NEW CUIRASSES



Location?	Blacksmith
Action?	Forging new cuirasses allows you to increase armoured soldiers' defence by 2 points. After researching this technology, your armoured soldiers will have 2 points added to their armour.

Experts and skilled workers were needed to make both cold steel and armour. Cuirass smithery was very complex and expensive work. Therefore, in order to equip armies with durable armour, rulers had to have smithies expanded and assign more means to the manufacture of armour.



CONDUCT A FENCING DRILL 2, 3, 4, 5, 6, 7



Location?	17th Century Barracks, 18th Century Barracks, Stable
Action?	Fencing drills increase the damage caused by your units wielding cold steel. They should be conducted for each specific unit type to improve its characteristics.

CONDUCT PHYSICAL TRAINING 2, 3, 4, 5, 6,7



Location?	17th Century Barracks, 18th Century Barracks
Action?	Physical training allows you to increase the defence parameters of many types of soldier. Physical training should be conducted for each specific unit type to improve its characteristics.

CONDUCT RIDING DRILL 2, 3, 4, 5, 6, 7



Location?	Stable
Action?	Riding drills increase the defence parameters of cavalymen. Riding drills should be conducted for each specific unit type to improve its characteristics.

CONDUCT REHEARSALS 6, 7



Location?	17th Century Barracks, 18th Century Barracks
Action?	Rehearsals increase musicians' defence parameters. Rehearsals should be conducted for each specific musician type to improve its characteristics.



DEVELOP MEDICAL SCIENCE



Location?	Academy
Action?	Developing medical science enables all soldiers wounded in battles to be healed Note: You can use this technology more than once..

Military medicine was actively developed in the 17th and 18th centuries. Regimental doctors were introduced to supervise soldiers' health and render medical care. A doctor commanded a sufficient number of medical orderlies to gather injured men on the battlefields and nurse the wounded and invalids. The development of medicine and the introduction of medical officers saved many lives and guarded military forces against epidemics.



ARTILLERY

RESEARCH IMPROVED ADDITIONS TO GUNPOWDER FORMULA



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Researching improved additions to the gunpowder formula allows you to increase your artillery's range of fire by 5%. After researching this technology, your artillery (cannon, mortars, howitzers, multi-barrelled cannon, vessels, towers) will fire 5% farther. For instance, this will allow your cannon to shell enemy cannon while they are still unable to return fire. This technology does not affect units with handguns.

Using various additions to improve gunpowder combustion efficiency increased the range of artillery fire. However, this method permitted only a slight improvement, as the further intensification of detonations resulted in the barrel's destruction.

DESIGN NEW BARREL TYPES: UNICORN, CARRONADE



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Designing new barrel types allows you to increase your artillery's range of fire by 10%. After researching this technology, your artillery (cannon, mortars, howitzers, multi-barrelled cannon, vessels, towers) will fire 10% farther. For instance, this will allow your cannon to shell enemy cannon while they are still unable to return fire. This technology does not affect units with handguns.

In the 17th and 18th centuries, artillery was significantly improved - guns became the norm and were more durable. In 1757, count Shuvalov introduced the unicorn cannon, which was lighter than the earlier guns. This cannon model was a predecessor of the howitzers and aided to win many victories in the Seven Years' War. In 1779, the British General Melville invented quite a new type of gun that significantly changed the armament of many European military fleets. It was a short-barrelled gun of a very large calibre that launched heavy cannonballs at short range and caused terrible damage to wooden vessels. Such projectiles could tear a huge hole in a ship's side, loosen the hull and cause dangerous cracks. The gun was of no use at long distances, but most artillery duels took place at short or medium ranges. These powerful cannon were originally manufactured by Carron Ironworks Company, Scotland, which is why they were named carronades. They significantly increased vessels' broadside power.

DESIGN MORE DURABLE GUN CARRIAGE: GRIBOVALLE SYSTEM



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Designing a durable Gribovalle gun carriage allows you to increase your artillery's durability by 150%. After researching this technology, your artillery (cannon, mortars, howitzers, multi-barrelled cannon) will have 2.5 times as much HP, making them harder to demolish.

In 1750, French artillery general Jean Baptiste Gribovalle (1715-1789) invented a horizontal foot screw that lightened cannon laying. In 1774, Gribovalle reorganized artillery. From then on, cannon calibres were standardized (field artillery comprised 12, 8 and 4 pound guns) in order to facilitate artillery ammunition supplies and each gun component was manufactured in compliance with an exactly prescribed standard. Thus, in case of a gun carriage breakage,

defective parts could be replaced quickly. Gribovalle's gun carriages were used in European armies for a long time and guns' durability was increased.

DESIGN A MULTI-BARRELLED CANNON



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Designing a multi-barrelled cannon allows you to build a new type of artillery - multi-barrelled cannon - in your artillery depot. Due to their high rate of fire, multi-barrelled cannons are capable of holding back major enemy forces.

In addition to conventional single-barrelled cannon, new experimental gun models were created in the 18th century. Inventors attempted to build multi-barrelled artillery systems to provide a greater rate of fire. These multi-barrelled cannon became the predecessors of modern machine-guns and automatic cannon.

RESEARCH NEW SIGHTING DEVICES FOR ARTILLERY



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Researching new advanced sighting devices for artillery allows you to increase your artillery's accuracy by 35%, making artillery much more effective in battle.

By means of both theoretical and practical research, scientists continuously improved artillery sighting devices. Thanks to this progress, gunners could fire more accurately and artillery effectiveness was increased.

DEVELOP MATHEMATICS



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Developing mathematics allows you to increase your artillery's accuracy by 35%, making artillery much more effective in battle.

The military paid much attention to theoretical research in the domains of ballistics, designs for sighting devices, the ratio between charge mass and projectile mass, etc.

In France, this research was conducted by Bellidore (in La Fère in 1730-1740), while Robius in England and Papacino d'Antoni in Turin (Piemonte) studied similar problems. Numbers were vital to their studies. The most prominent mathematicians and physicists conducted research for the theoretical justification of experimental gunnery results. Galilei founded a theory and passed it on to Newton, Blondelle, Bernoulli and Euler. They studied the laws of projectile flight and causes of deviation. Their knowledge was in turn passed on to artillery officers. In 1690, a gunnery school was founded in France.



FINANCE ARTILLERY REPAIR SHOPS



Location?	Academy
Availability?	Becomes available after building an artillery depot.
Action?	Financing artillery repair shops allows you to repair all artillery units. For instance, if your cannon have been damaged during a battle, you can finance artillery repair shops to repair the damaged cannon. Note: You can use this more than once.

In the 17th and 18th centuries, field smiths and repair shops were common to many artillery battalions. They possessed all necessary spares to repair damaged guns and allowed faulty cannon to be refit and used in battles again.

FOUNDRY MECHANIZATION 2, 3, 4, 5, 6, 7



Location?	Artillery Depot
Action?	Foundry mechanization decreases the building cost for artillery. After accomplishing this upgrade, the cost of cannon or howitzers is decreased by 7% per upgrade level. You should conduct foundry mechanization for cannon and howitzers independently to decrease their respective cost.

Foundries were rapidly developed in the 17th and 18th centuries. Specialists invented new alloys for cannon barrels and strove to mechanize founding and casting. Multifarious lifting jacks and pulley systems were introduced in order to lighten manual labour and thus reduce artillery production costs.

DEVELOP NEW METALWORKING METHODS 2, 3, 4, 5, 6, 7



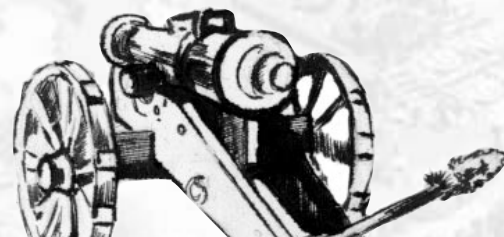
Location?	Artillery Depot
Action?	Developing new metalworking methods decreases artillery building times. Each upgrade level allows your cannon or howitzers to be constructed 50% faster than before. You should develop new metalworking methods for cannon and howitzers independently to decrease their respective building times.

Moulding is too complex a process to conduct manually. In the 17th and 18th centuries, new moulding presses and machinery were invented in order to simplify production and make it more effective.

INCREASE NUMBER OF DEFENSIVE CANNON 2, 3, 4, 5, 6, 7



Location?	Tower
Action?	Increase the number of defensive cannon in a tower to improve your rate of fire by 20%. The respective tower will fight enemies off more efficiently. You should increase the number of defensive cannon in each specific tower to upgrade it.



AEROSTATICS

DESIGN MONTGOLFIER



Location?	Academy
Availability?	Becomes available after advancing to the 18th century.
Action?	Designing a Montgolfier allows you to launch balloons. After researching this technology, the whole map will be revealed.

In 1782, the brothers Montgolfier invented a paper balloon capable of rising into the sky when filled with warm air. Pilate de Rosier performed the first flight in a fabric balloon in 1783. A balloon is raised off the ground due to the warm air inside it being lighter than the surrounding atmosphere. Early balloons were named Montgolfiers after their inventors. According to a manuscript found in Riazan (Russia), a cleric by the name of Kriakutnoy performed a flight in a balloon filled with warm air before the brothers Montgolfier in 1731. However, his flight was unsuccessful. Napoleon used balloons for reconnaissance - to observe enemy positions. Balloons were also used for various festivities and parades where they demonstrated the scientific achievements of their creators and helped raising people's morale.





BUILDINGS

Buildings

Each building in the game has its purpose and if built will render new possibilities. For instance, buildings relating to economics allow organizing resource extraction or increasing population; in military structures you can form forces and in scientific ones you develop technologies and launch upgrades. Only a few buildings are available at the very beginning of the game. After you build them, new structures become available, and so on till the moment when all buildings are available.

Note: Only artillery, ships, grenadiers or archers can demolish buildings.

Note: You can construct as many buildings as you like. However, all structures except walls, a paling and mines become more expensive when their number is increased.

Note: Some buildings, if undefended, can be captured by the enemy.

Note: All buildings, if undefended, can be captured by the enemy if they are incomplete or if an upgrade is in progress in them.

ECONOMIC STRUCTURES

Economic structures are used for the development of state economics.

TOWN HALL

The town hall serves to create peasants. Peasants can fetch the procured stones, food and wood to it. The town hall provides accommodation for 100 people. It can be captured by the enemy. When all the buildings are erected you may upgrade to the next technological epoch in the town hall.



Algerian Town Hall



Time	500
Life	5500
Cost	700 stone, 450 wood

Austrian Town Hall



Time	500
Life	4000
Cost	700 stone, 700 wood

English Town Hall



Time	500
Life	4030
Cost	700 stone, 700 wood

French Town Hall



Time	500
Life	4500
Cost	700 stone, 700 wood

Dutch Town Hall



Time	500
Life	4950
Cost	700 stone, 700 wood

Prussian Town Hall



Time	500
Life	4200
Cost	700 stone, 700 wood

Swedish Town Hall



Time	500
Life	5000
Cost	700 stone, 700 wood

Piedmontese Town Hall



Time	500
Life	4100
Cost	700 stone, 700 wood

Russian Town Hall



Time	500
Life	4050
Cost	700 stone, 680 wood

Turkish Town Hall



Time	500
Life	4000
Cost	500 stone, 600 wood

Polish Town Hall



Time	500
Life	4300
Cost	700 stone, 700 wood

Saxon Town Hall



Time	500
Life	4300
Cost	700 stone, 700 wood

Ukrainian Town Hall



Time	500
Life	5300
Cost	700 wood

Portuguese Town Hall



Time	500
Life	5200
Cost	650 stone, 700 wood

Spanish Town Hall



Time	500
Life	4250
Cost	700 stone, 700 wood

Venetian Town Hall



Time	500
Life	5100
Cost	700 stone, 700 wood

DWELLINGS

A dwelling gives you 15 habitation spaces.
It can be captured by the enemy.

Algerian Dwelling



Time	100
Life	4300
Cost	50 stone, 50 wood

Austrian Dwelling



Time	100
Life	4000
Cost	50 stone, 50 wood

English Dwelling



Time	100
Life	5000
Cost	50 stone, 50 wood

French Dwelling



Time	100
Life	4000
Cost	50 stone, 50 wood

Dutch Dwelling



Time	100
Life	4500
Cost	50 stone, 50 wood

Piedmontese Dwelling



Time	100
Life	4500
Cost	50 stone, 50 wood

Polish Dwelling



Time	100
Life	4100
Cost	50 stone, 50 wood

Portuguese Dwelling



Time	100
Life	4500
Cost	50 stone, 50 wood

Prussian Dwelling



Time	100
Life	4500
Cost	50 stone, 50 wood

Izba



Time	100
Life	5000
Cost	60 wood

Saxon Dwelling



Time	100
Life	4000
Cost	50 stone, 50 wood

Spanish Dwelling



Time	100
Life	4200
Cost	50 stone, 50 wood

Swedish Dwelling



Time	100
Life	5000
Cost	50 stone, 50 wood

Turkish Dwelling



Time	100
Life	4000
Cost	50 stone, 50 wood

Hut



Time	100
Life	4150
Cost	60 wood

Venetian Dwelling



Time	100
Life	5000
Cost	50 stone, 50 wood

MILL

Mills are used for the growing and treatment of crops. Peasants may bring the harvested food to the mill. It can be captured by the enemy. A mill provides basic upgrades in order to make food production more effective.

Mill (Algeria, Turkey)



Time	300
Life	20000
Cost	150 stone, 30 wood

Mill (Russia, Ukraine)



Time	300
Life	15000
Cost	210 wood

Mill (Remaining Countries)



Time	300
Life	20000
Cost	150 stone, 30 wood

STOREHOUSE

Storehouses are intended for storing wood and stone extracted by peasants. They can be captured by the enemy.

Storehouse (Algeria, Turkey)



Time	100
Life	10000
Cost	10 stone, 30 wood

Storehouse (As, En, Fr, Ni, Pr, Sa, Sw)



Time	100
Life	10000
Cost	20 stone, 50 wood

Storehouse (Pi, Pg, Sp, Ve)



Time	100
Life	10000
Cost	50 stone, 20 wood

Storehouse (Po, Ru, Uk)



Time	100
Life	10000
Cost	10 wood

GOLD MINE

Gold mines are needed to extract gold. They can be captured by the enemy. To increase the limit of workers a mine can hold, carry out a series of mine infrastructure upgrades. Each gold mine requires its own upgrades. The final mine upgrade allows 95 peasants to work in a single mine.



Time	300
Life	2500
Cost	100 stone, 100 wood

IRON MINE

Iron mines are needed to extract iron. They can be captured by the enemy. To increase the limit of workers a mine can hold, carry out a series of mine infrastructure upgrades. Each Iron mine requires its own upgrades. The final mine upgrade allows 95 peasants to work in a single mine.



Time	300
Life	2500
Cost	100 stone, 100 wood

COAL MINE

Coal mines are needed to extract coal. They can be captured by the enemy. To increase the limit of workers a mine can hold, carry out a series of mine infrastructure upgrades. Each coal mine requires its own upgrades. The final mine upgrade allows 95 peasants to work in a single mine.



Time	300
Life	2500
Cost	100 stone, 100 wood

MARKET

A market allows you to sell, buy or exchange resources. It can be captured by the enemy.

Market (Algeria, Turkey)



Time	750
Life	4500
Cost	150 stone, 450 wood

Market (As, En, Fr, NI, Po, Pr, Sa, Sw)



Time	750
Life	4500
Cost	450 wood

Market (Pi, Pg, Sp, Ve)



Time	750
Life	4000
Cost	450 wood

Market (Russia, Ukraine)



Time	750
Life	4000
Cost	450 wood

FORTIFICATIONS

Fortifications serve to defend your city from enemy assaults.

PALING

A wooden paling is the cheapest and fastest built artificial obstacle. Shooting units can fire from behind it. Gates may be built into the paling.



Time	10
Life	500
Cost	5 wood
Defence	15

WALLS

Walls are strong fortifications. They can be demolished only by artillery, ships, grenadiers or archers. One cannot shoot through the walls. Gates may be built into the stone wall. When constructed, walls require stone.

Wall (Algeria, Turkey)



Time	1100
Life	65000
Cost	60 stone

Wall (Russia)



Time	2000
Life	65000
Cost	51 stone

Wall (As, En, Fr, NI, Pi, Po, Pg, Pr, Sa, Sp, Ve)



Time	900
Life	65000
Cost	51 stone

TOWERS

A tower is a defensive construction. Towers can be demolished only by artillery, grenadiers or archers. A series of upgrades to increase the number of cannons in the tower will enable you to improve its rate of fire. Upgrades should be carried out in each tower separately. Tower cannonry takes up a substantial quantity of coal and iron.

Tower (Algeria, Turkey)



Time	3500
Life	22500
Cost	90 stone, 150 wood, 100 gold

Upkeep cost	125
Shots	1000 (cannonball)



Tower (Russia)



Time	3500
Life	21000
Cost	100 stone, 100 wood

Upkeep cost 125

Shots 1000 (cannonballs)

Tower (As, En, Fr, NI, Pi, Po, Pg, Pr, Sa, Sp, Ve)



Time	4500
Life	20000
Cost	100 stone, 100 wood, 150 gold

Upkeep cost 125

Shots 1000 (cannonballs)



MILITARY STRUCTURES

Military structures are used to create and train your armies.



17TH CENTURY BARRACKS

Barracks allow you to build infantry units, officers and drummers. They provide 150 additional habitation spaces.

Barracks (Algeria and Turkey)



Time	300
Life	35000
Cost	400 stone, 400 wood

Archer House (Russia)



Time	250
Life	25000
Cost	20 stone, 200 wood

Cossack House (Ukraine)



Time	300
Life	20000
Cost	150 stone, 150 wood

Austrian 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

English 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

French 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Dutch 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Prussian 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Venetian 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Piedmontese 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Saxon 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold



Polish 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Spanish 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

18TH CENTURY BARRACKS

These barracks allow you to build infantry units, officers and drummers of the 18th century. They provide 250 habitation spaces.

Portuguese 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Swedish 17th Century Barracks



Time	300
Life	40000
Cost	100 stone, 100 wood, 300 gold

Austrian 18th Century Barracks



Time	25000
Life	55000
Cost	2950 stone, 1700 wood, 12500 gld.

English 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Polish 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Saxon 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

French 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Portuguese 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Spanish 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Dutch 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Prussian 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Swedish 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Piedmontese 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Russian 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

Venetian 18th Century Barracks



Time 25000

Life 55000

Cost 2950 stone,
1700 wood, 12500 gld.

STABLE

In a stable you can train cavalry of the 17th century. After advancing to the 18th century, you can create new cavalry of the 18th century.

Algerian Stable



Time	500
Life	55000
Cost	2600 stone, 1000 wood

Austrian Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

English Stable



Time	1500
Life	25000
Cost	3350 wood, 900 gold

French Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Dutch Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Piedmontese Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Polish Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Portuguese Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Prussian Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Russian Stable



Time	1500
Life	25000
Cost	8950 wood 650 gold

Saxon Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Swedish Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Spanish Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

Turkish Stable



Time	500
Life	55000
Cost	2600 stone, 1000 wood

Ukrainian Stable



Time	1500
Life	10000
Cost	850 stone, 3750 wood, 950 gold

Venetian Stable



Time	2500
Life	20000
Cost	100 stone, 3500 wood, 700 gold

ARTILLERY DEPOT

The artillery depot serves to create artillery. It can be captured by the enemy.

Algerian Artillery Depot



Time	1000
Life	40000
Cost	1200 stone, 505 wood, 1400 iron

Austrian Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

English Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

French Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Dutch Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Piedmontese Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Polish Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Spanish Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Venetian Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Prussian Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Swedish Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Russian Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Turkish Artillery Depot



Time	1000
Life	40000
Cost	1200 stone, 505 wood, 1400 iron

Saxon Artillery Depot



Time	1000
Life	40000
Cost	1000 stone, 350 wood, 1400 iron

Ukrainian Artillery Depot



Time	1000
Life	40000
	4750 stone, 4350 wd. 1400 iron, 102 gold

SHIPYARD

Shipyards allow you to build vessels. Boats fetch the procured fish to the shipyard.

Shipyard (Algeria, Turkey)



Time	5000
Life	55000
Cost	950 stone, 750 wood, 400 iron

Shipyard (Russia)



Time	5000
Life	60000
Cost	1000 stone, 1200 wood, 500 iron

Shipyard (Portugal)

The Portuguese shipyard can shoot like a tower.



Time	5000
Life	65000
Cost	1100 stone 1700 wd., 500 iron

Upkeep cost 250

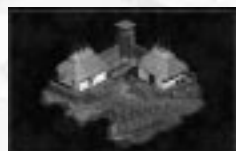
Shots 1000 (cannonballs)

Shipyard (As, En, Fr, NI, Pi, Po, Pr, Sa, Sp, Sw, Ve)



Time	5000
Life	65000
Cost	1100 stone, 1700 wood, 500 iron

Shipyard (Ukraine)



Time	5000
Life	60000
Cost	3000 wood



SCIENTIFIC AND TECHNOLOGICAL STRUCTURES

These buildings are intended for developing new technologies and launching various upgrades.

MINARET (ALGERIA, TURKEY)

A minaret is the scientific centre of the city. Here you can learn important technologies and launch various upgrades. It can be captured by the enemy.



Time	500
Life	65000
Cost	1100 stone, 1450 wood

ACADEMY

An academy is the scientific centre of your city. In the academy you can develop basic technologies and carry out numerous upgrades. It can be captured by the enemy.

Austrian Academy



Time	2000
Life	65000
Cost	1100 stone, 1250 wood

English Academy



Time	2000
Life	63000
Cost	1200 stone, 1150 wood

French Academy



Time	2000
Life	65000
Cost	1100 stone, 1250 wood

Dutch Academy



Time	2000
Life	63000
Cost	1230 stone, 1050 wood

Prussian Academy



Time	2000
Life	63000
Cost	1150 stone, 1200 wood

Swedish Academy



Time	2000
Life	63000
Cost	1000 stone, 1350 wood

Piedmontese Academy



Time	2000
Life	63000
Cost	1300 stone, 1050 wood

Russian Academy



Time	2700
Life	65000
Cost	1300 stone, 1250 wood

Ukrainian Academy



Time	2700
Life	65000
Cost	1200 stone, 1350 wood

Polish Academy



Time	2000
Life	63000
Cost	800 stone, 950 wood

Saxon Academy



Time	2000
Life	63000
Cost	900 stone, 1450 wood

Venetian Academy



Time	2000
Life	63000
Cost	1260 stone, 1090 wood

Portuguese Academy



Time	2000
Life	61000
Cost	1300 stone, 1150 wood

Spanish Academy



Time	2000
Life	63000
Cost	1000 stone, 1350 wood



BLACKSMITH

Blacksmiths allow you to carry out upgrades relating to metalworking. You should defend your blacksmith, because an enemy can capture it.

Algerian Blacksmith



Time	350
Life	6500
Cost	50 stone, 100 wood, 640 iron

Austrian Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

English Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

French Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Dutch Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Piedmontese Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Polish Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Portuguese Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Prussian Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Russian Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Saxon Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Spanish Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Swedish Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron

Turkish Blacksmith



Time	350
Life	6500
Cost	50 stone, 100 wood, 640 iron

Ukrainian Blacksmith



Time	300
Life	4500
Cost	50 stone, 100 wood, 640 iron

Venetian Blacksmith



Time	300
Life	5500
Cost	50 stone, 100 wood, 640 iron



OTHER STRUCTURES

DIPLOMATIC CENTRE

In the diplomatic centre you can hire mercenaries from other countries. You can construct only one diplomatic centre.

Algerian Diplomatic Centre



Time	1000
Life	5500
Cost	2020 stone, 4600 wood

Austrian Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

English Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

French Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Dutch Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Piedmontese Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Russian Diplomatic Centre



Time	1000
Life	6500
Cost	3700 stone, 7900 wood

Turkish Diplomatic Centre



Time	1000
Life	5500
Cost	2020 stone, 4600 wood

Polish Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Saxon Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Ukrainian Diplomatic Centre



Time	1000
Life	5000
Cost	3700 stone, 3900 wood

Portuguese Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Spanish Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Venetian Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Prussian Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood

Swedish Diplomatic Centre



Time	1000
Life	4500
Cost	1700 stone, 4900 wood



Mosque

The mosque allows you to build a mullah.

Mosque (Algeria, Turkey)



Time	300
Life	5000
Cost	100 stone, 100 wood, 50 iron

Church

The church allows you to create priests.

Austrian Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

English Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

French Church



Time	1000
Life	6000
Cost	150 stone, 100 wood, 150 iron

Dutch Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

Piedmontese Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

Polish Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

Portuguese Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

Prussian Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

Russian Church



Time	500
Life	4500
Cost	100 stone, 100 wood, 50 iron

Saxon Church



Time	500
Life	4200
Cost	100 stone, 100 wood, 50 iron

Spanish Church



Time 500

Life 4200

Cost 100 stone,
100 wood, 50 iron

Swedish Church



Time 500

Life 4200

Cost 100 stone,
100 wood, 50 iron

Ukrainian Church



Time 500

Life 5300

Cost 100 stone,
100 wood, 50 iron

Venetian Church



Time 500

Life 4200

Cost 100 stone,
100 wood, 50 iron



UNITS



CIVILIAN UNITS

PEASANTS

All their lives peasants were working for their masters - cultivating the land, extracting resources, and multiplying the prosperity of their lords. At wartime, peasants were recruited to militia squads. Indeed this was the least battle-worthy part of an army. The morale of these fighters was rather low, too. Although people are capable of self-sacrificing feats when they protect their families, it is very difficult to control such an army. Moreover, insufficient fighting training resulted in unwarrantably heavy casualties. However, the militia was of great numbers and low value. These soldiers did well in performing ancillary functions, waging guerrilla wars and building fortifications. Commanders often resorted to the militia when the main army resources had already been exhausted.

It is hard to describe their weapons or equipment, because it was too diverse or lacking at all. Militia men mainly fought with their own tools (axes, smoothbore hunting guns, etc). Militia men also got some pikes and guns from military storage. Peasants mainly used their own clothes instead of uniforms. The militia were only summoned for combat operations; after a battle, people returned to their usual work.

You should defend your peasants because an enemy can capture them.

Peasant (Russia)



Life:	50
Time:	400
Cost:	100 food
Attack:	20 (sword)

Upgrades:

Food procurement:

Academy:	Cultivate new cultures of wheat (+ 20%)
Academy:	Cultivate new cultures of rye (+ 15%)
Academy:	Raise agriculturists' salary (+ 10%)
Academy:	Carry out field melioration (wheat is infinite in the fields)
Mill:	Upgrade ways of grain treatment (+ 140%)
Mill:	Upgrade ways of grain storage (+ 120%)
Blacksmith:	Manufacture agricultural equipment (+ 100%)

Wood extraction:

Academy:	Develop new woodworking tools (+ 100%)
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Stone extraction:

Academy:	Develop mining (+ 200%)
Academy:	Raise miners' salary (+ 400%)

Structures' building time:

Academy:	Raise builders' salary (+ 75%)
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Peasant (England, France, Sweden, Netherlands)



Life:	50
Time:	400
Cost:	100 food
Attack:	20 (sword)

Peasant (Poland)



Life:	50
Time:	400
Cost:	100 food
Attack:	20 (sword)

Peasant (Austria, Prussia, Saxony)



Life:	100
Time:	400
Cost:	100 food
Attack:	20 (sword)

Peasant (Turkey, Algeria)



Life:	50
Time:	400
Cost:	100 food
Attack:	20 (sword)

Peasant (Spain, Portugal, Venice, Piemonte)



Life:	50
Time:	400
Cost:	100 food
Attack:	20 (sword)

Peasant (Ukraine)

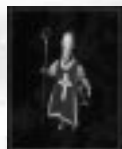


Life:	60
Time:	400
Cost:	100 food
Attack:	20 (sword)

PRIESTS

Priests were a spiritual bastion of the army. A clergyman was part of each and every squad to support the soldiers' morale. The church also supervised medical aid and the transports of the wounded from a battlefield and played a great role in many political arrangements. Church representatives took part in diplomatic negotiations and were often very successful. Missionary work was of great importance. Priests extended their confession and converted other peoples to their belief.

Priests



Life:	100
Time:	750
Cost:	150 gold, 50 food
Healing:	5

Pope



Life:	65
Time:	750.
Cost:	100 gold, 50 food
Healing:	7

Padre



Life:	100
Time:	750
Cost:	175 gold, 50 food
Healing:	10

Mullah



Life:	75
Time:	950
Cost:	50 food
Healing:	4



MONTGOLFIER

In 1782, the brothers Montgolfier invented a paper balloon capable of rising into the sky when filled with warm air. Pilate de Rosier performed the first flight on a fabric balloon in 1783. A balloon creates a carrying power thanks to the warm air inside being lighter than the surrounding atmosphere. Such balloons are called Montgolfiers after their inventors. According to a manuscript found in Riazan (Russia), the cleric Kriakutnoy performed a flight on a balloon filled with warm air before the brothers Montgolfier in 1731. However, his flight was unsuccessful. Napoleon used balloons for reconnaissance - to observe enemy positions. Balloons were also used at various festivities and parades. Giving a demonstration of scientific achievements, they helped raising people's morale. Montgolfiers fly. They open the whole mini-map.



Montgolfiers are launched after the transition to the 18th century and a special upgrade in the Academy has been carried out. When playing for the Ukraine, the Montgolfier will show up as soon as you are in the 18th century.



INFANTRY WITH COLD STEEL

ROUNDSHIERS

In the Austrian army, a few infantry detachments armed with cold steel still remained. The mission of those brave soldiers was to wait for a pause in the musketeers' shooting and assault an enemy to breach his pikemen's file or chop his musketeers. In the 16th - 17th centuries, musketeers were not too effective and depended much on the weather. A Roundshier was armed with a sword and equipped with a plate mail armour and a Rundschild - a small round shield. In battle formation, Roundshiers occupied the front lines. Later on, as firearms were developed, this echo of medieval infantry vanished completely.

Roundshier (Austrian)



Life:	100
Time:	125
Cost:	25 food, 10 iron
Attack:	6 (sword)
Defence:	1 (pike), 3 (sword), 4 (arrow), 5 (shot), 100 (cannonball), 255 (canister)

Upgrades:

Attack:

Barracks 17th century: Conduct a fencing drill 2 (+1) g50, f150

Barracks 17th century: Conduct a fencing drill 3 (+2) g200, f1500

Barracks 17th century: Conduct a fencing drill 4 (+3) g325, f1300

Defence:

Barracks 17th century: Conduct a physical training 2 (+1) g70, f200, i120

Barracks 17th century: Conduct a physical training 3 (+2) g150, f4360, i320

Barracks 17th century: Conduct a physical training 4 (+3) g250, f506, i402

Academy: Research improved steel grades for cuirasses.

Blacksmith: Forge new cuirasses.

Roundshier (mercenary)

Has low building cost. The mercenary Roundshier is feeble in attack and defence. This unit is effective against grenadier mercenaries. As all the mercenaries, Roundshiers require gold to keep them. If you have no gold left they will revolt against you.



Life:	35
Time:	50
Cost:	7 gold
Keeping cost:	1
Attack:	14 (sword)
Defence:	1 (pike), 3 (sword), 4 (arrow), 5 (shot), 100 (cannonball), 194 (canister)

LIGHT INFANTRYMEN

The Ottoman Empire was populated with lots of various peoples. Manifold tribes made up the army, while there were many irregular forces. They were armed with varied steel weapons and sometimes bows or muskets. These savage warriors terrified enemies by their brutality and rapidity. However, like in all irregular armies, the weak discipline made them very unstable in a battle.

Light Infantryman (Turkey, Algeria)

The Turkish light infantryman is armed with a sabre. He has a low attack parameter. A Turkish light infantryman has a very short building time. This unit is effective in formations only.

You can build Turkish light infantrymen in a barrack.



Life:	55
Time:	50
Cost:	35 food, 1 iron
Attack:	6 (sword)

Upgrades:

Attack:

Barrack: Conduct a fencing drill 2 (+1) g50, f100

Barrack: Conduct a fencing drill 3 (+2) g200, f1100

Barrack: Conduct a fencing drill 4 (+3) g325, f1300

Defence:

Barrack: Conduct a physical training 2 (+1) g70, f200, i120

<i>Barrack:</i>	Conduct a physical training 3 (+ 2) g1 50, f6360, i320
<i>Barrack:</i>	Conduct a physical training 4 (+ 3) g250, f506, i420

Mercenary Light Infantryman (Turkey)

The Turkish light infantryman is inexpensive to build. He has low attack and defence parameters. As all the mercenaries, light infantrymen require gold to keep them. If you have no gold left, they will revolt against you.

This unit is built in a diplomatic centre.



Life:	75
Time:	50
Cost:	5 gold
Attack:	14 (sword)



PIKEMEN

Firing fuse muskets was a very slow process, while the fire was far from being accurate or effective. Therefore pikemen squads were added to musketeer detachments in order to defend them from cavalry charges in open space. On average, pikemen constituted about 30% of the infantry during the Thirty Years War. Pikemen were virtually the last infantry force of European regular armies which was equipped with cuirasses.

A pikeman's armour comprised an iron helm, a cuirass with knee-long leg-guards, narrow elbow-long shoulder-guards, and gauntlets with large cuffs. The total armour weight was about 20 kg (45 lb). It could protect from arrows, pistol bullets fired from more than 3-4 m (10-14 ft), and even musket bullets fired from large distances.

Pikemen were armed with pikes with a wooden shaft of 5.2-5.8 m (17-19 ft) and swords. Pikemen were very effective in close fight; early in the 17th century, they were used both in attacks and for defence purposes. In 1674, pikes played a significant role in the battle of Enzheim, when German cavalry did not dare to assault Turenne's pikemen square. However, as firearms were developed, the role of pikemen became less significant. Body armour was abolished here and there. Soldiers became more mobile and less expensive. By the end of the 17th century, pikemen were mainly used as defensive units. All European armies gradually refused pikemen, and their number fell considerably. Pikemen became armed with pistols and sometimes muskets. In the 18th century, they used no armour and wear a customary uniform - a broadcloth caftan, a camisole (sometimes of elk or goat leather), trousers, and stockings. When it was cold, they also wore a cloak.

Pikemen fought in tight arrays of six files each. Usually they were marshalled in a manner allowing musketeers to retreat behind them,

while pikemen could easily form a square formation to protect musketeers from cavalry charges. Later, pikes gave place to bayonets in close fight. Bayonets were surely important in hand-to-hand fight, but by far not as good as pikes. Pikemen were the most battle-worthy infantry for close fighting.

European Pikeman 17th century (Austria)

The European pikeman of the 17th century is an infantryman armed with a long pike. Strong armour protects him from bullets and splinters. This unit is effective in military formations against cavalry.

The 17th century pikeman is built in the barracks.



Life:	95
Time:	150
Cost:	25 food, 20 iron
Attack:	8 (pike)
Defence:	2 (pike), 2 (sword), 1 (arrow), 5 (shot), 7 (cannonball), 255 (canister)

Upgrades:

Attack:

<i>Barracks 17th century:</i>	Conduct a fencing drill 2 (+1) g50, f200
<i>Barracks 17th century:</i>	Conduct a fencing drill 3 (+2) g300, f1300
<i>Barracks 17th century:</i>	Conduct a fencing drill 4 (+3) g450, f3600
<i>Barracks 17th century:</i>	Conduct a fencing drill 5 (+1) g1850, f7200
<i>Barracks 17th century:</i>	Conduct a fencing drill 6 (+2) g2000, f16030

Defence:

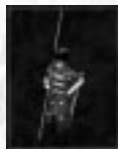
<i>Barracks 17th century:</i>	Conduct a physical training 2 (+1) g50, f150
<i>Barracks 17th century:</i>	Conduct a physical training 3 (+2) g175, f900
<i>Barracks 17th century:</i>	Conduct a physical training 4 (+3) g300, f4500
<i>Barracks 17th century:</i>	Conduct a physical training 5 (+1) g507, f9005
<i>Barracks 17th century:</i>	Conduct a physical training 6 (+2) g3050, f18010
<i>Academy:</i>	Research improved steel grades for cuirasses (+2)
<i>Blacksmith:</i>	Forge new cuirasses (+2)

European Pikeman 17th century (En, Fr, NI, Pi, Pg, Pr, Sa, Sp, Sw, Ve)



Life:	95
Time:	150
Cost:	25 food, 20 iron
Attack:	8 (pike)
Defence:	2 (pike), 2 (sword), 1 (arrow), 5 (shot), 7 (cannonball), 255 (canister)

Pikeman, 17th century (Poland)



Life:	100
Time:	100
Cost:	45 food, 1 wood
Attack:	7 (pike)

European Pikeman 18th century (Austria)

The European pikeman of the 18th century is an infantryman armed with a long pike. This unit is effective against both infantry and cavalry. The pikeman has medium attack parameters and a very short building time.

This unit is built in the 18th century barracks.



Life:	85
Time:	25
Cost:	15 food, 1 gold
Attack:	10 (pike)

Upgrades:

Attack:

Barracks 18th century: Conduct a fencing drill 2 (+1) g800, f2000

Barracks 18th century: Conduct a fencing drill 3 (+1) g3200, f7500

Barracks 18th century: Conduct a fencing drill 4 (+2) g12800, f32000

Barracks 18th century: Conduct a fencing drill 5 (+2) g12800, f32000

Barracks 18th century: Conduct a fencing drill 6 (+2) g12800, f32000

Barracks 18th century: Conduct a fencing drill 7 (+3) g40800, f45700

Defence:

Barracks 18th century: Conduct a physical training 2 (+1) g500, f1500

Barracks 18th century: Conduct a physical training 3 (+2) g3500, f7000

Barracks 18th century: Conduct a physical training 4 (+3) g13500, f37000

Barracks 18th century: Conduct a physical training 5 (+4) g13500, f37000

Barracks 18th century: Conduct a physical training 6 (+5) g13500, f37000

Barracks 18th century: Conduct a physical training 7 (+10) g35000, f64600

European Pikeman 18th century (England, France, Piemonte, Poland, Portugal, Prussia, Russia, Saxony, Spain, Venice)



Life:	85
Time:	25
Cost:	15 food, 1 gold
Attack:	10 (pike)

Pikeman 18th century (Sweden)



Life:	85
Time:	25
Cost:	16 food, 2 gold
Attack:	11 (pike)



SPEARMEN

In addition to streletses, there were soldiers armed with pikes in the Russian army. Sometimes streletses were armed with this weapon to meet cavalry charges in a close fight. Spearman could wear an armour - a chain mail or a cuirass. In addition to a pike, they also wielded a sabre. A spearman's equipment comprised a fur-cap, a long outer caftan, a zipun (a broadcloth camisole), party broad trousers and gloves. A bright-colored outer caftan was belted with a sash. Some of the soldiers were armed with a sabre and a protasan (a long spear with a crescent of two short metal spikes between the shaft and the spear-head).

Spearman (Russia)

The Russian spearman is an infantryman armed with a long pike. This unit wears armour which protects him from bullets and splinters. This is the most effective pikeman of the 17th century.

You can build this unit in strelets barracks.



Life:	100
Time:	180
Cost:	55 food, 15 iron
Attack:	9 (pike)
Defence:	2 (pike), 1 (sword), 1 (arrow), 4 (shot), 4 (cannonball), 150 (canister)

Upgrades: Attack:

Strelets Barracks:	Conduct a fencing drill 2 (+1) g50, f200
Strelets Barracks:	Conduct a fencing drill 3 (+2) g300, f1300
Strelets Barracks:	Conduct a fencing drill 4 (+3) g450, f3600

Strelets Barracks: Conduct a fencing drill 5 (+1) g1850, f7200

Strelets Barracks: Conduct a fencing drill 6 (+2) g2000, f16030

Defence:

Strelets Barracks: Conduct a physical training 2 (+1) g50, f150

Strelets Barracks: Conduct a physical training 3 (+2) g175, f900

Strelets Barracks: Conduct a physical training 4 (+3) g300, f4500

Strelets Barracks: Conduct a physical training 5 (+1) g507, f9005

Strelets Barracks: Conduct a physical training 6 (+2) g3050, f18010

Academy: Research improved steel grades for cuirasses (+2)

Blacksmith: Forge new cuirasses (+2)



OTTOMAN PIKEMAN

In addition to janissaries with shooting weapons, there were soldiers armed with pikes and yataghans in the Ottoman Empire. Their mission was to defend shooters from cavalry charges and counterattack enemy forces. At the times of low rates of musket fire and low shot effectiveness, cold steel fighters were of great importance. In the Turkish army, there were both well-trained pikemen and numerous irregular forces. Cold steel was sometimes supplemented with bows, pistols, or muskets. These soldiers were indispensable in close combat, so they were part of the army for long.

Ottoman Pikeman (Turkey, Algeria)

Ottoman pikemen are armed with long pikes. This unit is effective in formations against cavalry. These pikemen have a short building time.

You can build this unit in a barracks.



Life:	100
Time:	150
Cost:	55 food, 2 iron
Attack:	9 (pike)

Upgrades:

Attack:

<i>Barracks 17th century:</i>	Conduct a fencing drill 2 (+1) g50, f200
<i>Barracks 17th century:</i>	Conduct a fencing drill 3 (+2) g300, f600
<i>Barracks 17th century:</i>	Conduct a fencing drill 4 (+3) g450, f1200
<i>Barracks 17th century:</i>	Conduct a fencing drill 5 (+1) g1850, f2200
<i>Barracks 17th century:</i>	Conduct a fencing drill 6 (+2) g2000, f16030

Defence:

<i>Barracks 17th century:</i>	Conduct a physical training 2 (+1) g50, f150
<i>Barracks 17th century:</i>	Conduct a physical training 3 (+2) g175, f900
<i>Barracks 17th century:</i>	Conduct a physical training 4 (+3) g300, f4500
<i>Barracks 17th century:</i>	Conduct a physical training 5 (+1) g507, f9005
<i>Barracks 17th century:</i>	Conduct a physical training 6 (+2) g3050, f18010



OFFICERS

As Europe began to form regular armies, the old feudal system was changed and replaced by a new centralized organisation. Knighthood gave way to cavalry; separate feudal squads were replaced with detachments of cavalry and infantry with officers in command. Strict subordination was established in order to structure military service as efficiently as possible and to allow for supreme control. The number of officers was limited, and long service was not a sufficient condition for an officer's promotion - a vacancy was also required.

The European military organisation was as follows: A Swedish regiment, for instance, consisted of 8 companies (4 companies per battalion); an infantry company comprised a captain, one or two lieutenants, one or two ensigns, 5 corporals, 3 musicians and 140 private soldiers (about 150 men in total). The Swedish cavalry was divided into regiments of 3 squadrons each (12 companies). Each company included 124 private soldiers, one trumpeter, two captains, two lieutenants, two cornets, a standard cadet, two quartermasters and five corporals. A Russian infantry regiment of this time comprised 1,348 units: 3 staff officers, 40 chief officers, 80 corporals, 27 musicians, 24 craftsmen, 8 clerks and barbers, 86 cabmen and 1,120 private soldiers. A Russian dragoon regiment consisted of 5 squadrons (about 1,200 men in total), 38 staff officers and chief officers, 80 corporals, 920 privates and 290 non-combatants. The number of officers in subdivisions determined the battle value and control of the forces. An officer's weapons comprised a sword with a gilded hilt, two pistols, and - throughout most of Europe - various kinds of halberds. They could also wear armour or a cuirass (without kneesocks or leg-guards). Their uniform was decorated with expensive fabrics and golden embroidery. The officer corps comprised nobles only - it was very difficult for an ignoble to rise that high in the ranks.

European Officer, 17th century (Austria)

The European officer of the 17th century is mainly used for commanding military formations of 17th century infantry. Officers have high attack and defence parameters. This unit requires gold to maintain.

You can create the European officer in 17th century barracks.



Life:	150
Time:	150
Cost:	60 food, 50 iron, 200 gold
Keeping cost:	2
Attack:	150 (pike)

Upgrades:

Attack:

Barracks 17th century: Conduct a fencing drill 2 (+150) g50, f250

Defence:

Barracks 17th century: Conduct a physical training 2 (+20) g450, f2850

Academy: Research improved steel grades for cuirasses (+2)

Blacksmith: Forge new cuirasses (+2)

European Officer, 17th century (England, France, Netherlands, Piemonte, Poland, Portugal, Prussia, Saxony, Spain, Sweden, Venice)



Life:	150
Time:	150
Cost:	60 food, 50 iron, 200 gold
Keeping cost:	2
Attack:	150 (pike)

Officer (Algeria, Turkey)



Life:	150
Time:	150
Cost:	45 food, 175 gold
Keeping cost:	12
Attack:	150 (pike)

Commander (Russia)



Life:	150
Time:	150
Cost:	60 food, 10 iron, 150 gold
Keeping cost:	2
Attack:	150 (pike)

Officer, 18th century (Austria)

The European officer of the 18th century is used for commanding military formations of 18th century infantry. Officers have high attack and defence parameters and require gold to maintain.

These units are created in 18th century barracks.



Life:	150
Time:	150
Cost:	50 food, 15 iron, 225 gold
Keeping cost:	12
Attack:	150 sword

Upgrades:

Attack:

Barracks 18th century: Conduct a fencing drill 2 (+ 150) g800, f1000

Defence:

Barracks 18th century: Conduct a physical training 2 (+ 20) g350, f1706

Officer, 18th century (En, Fr, NI, Pi, Po, Pg, Pr, Ru, Sa, Sp, Sw, Ve)



Life:	150
Time:	150
Cost:	50 food, 15 iron, 225 gold
Keeping cost:	12
Attack:	150 sword

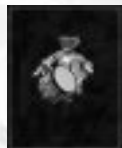
MUSICIANS

There were a certain number of musicians both in the infantry and cavalry forces (usually 2 or 3 per company). These were mainly drummers and flutists in the infantry and trumpeters in the cavalry. Their main task was to give signals on the battlefield. Musicians also raised the soldiers' morale and sense of community. It is hard to imagine ranks of infantry marching without being accompanied by a drum in the period of linear tactics. A musician's outfit was marked with bright colours - he had coloured stripes on his sleeves, wings, etc. A musician was equipped with a sword and sometimes with a pistol, but had no armour.

European Drummer, 17th century (Austria)

European drummers of the 17th century are necessary in order to create military formations of 17th century infantry. Drummers of the 17th century cannot fight. They possess the largest range of vision.

You can create this unit in 17th century barracks.



Life:	90
Time:	150
Cost:	50 food

Upgrades:
Defence:

Barracks 17th century: Conduct rehearsals 2 (+20) g50, f706

European Drummer, 17th century (En, Fr, NI, Pi, Po, Pg, Pr, Sa, Sp, Sw, Ve)



Life:	90
Time:	150
Cost:	50 food

Drummer (Algeria and Turkey)



Life:	50
Time:	150
Cost:	40 food

Drummer, 17th century (Russia)



Life:	50
Time:	150
Cost:	50 food

European Drummer, 18th century (Austria)

European drummers are necessary in order to create military formations of 18th century infantry. Drummers of the 18th century cannot fight. They possess the largest range of vision.

You can create this unit in 18th century barracks.



Life:	100
Time:	150
Cost:	50 food

Upgrades:

Defence:

Barracks 18th century: Conduct rehearsals 2 (+70) g50, f706

European Drummer, 18th century (Fr., Nl., Pi., Po., Pg., Pr., Ru., Sa., Sp., Sw., Ve.)



Life:	100
Time:	150
Cost:	50 food

Bagpiper (England)



Life:	95
Time:	150
Cost:	40 food

SHOOTING INFANTRY

ARCHERS

These fighters were armed with bows and arrows. Their bows possessed a high rate of fire - up to 12 shots per minute - but a low range of fire and limited killing power. A soldier's stamina also influenced his range and rate of fire. These savage warriors terrified enemies through their brutality and rapidity. However, like in all irregular armies, their lack of discipline made them very unreliable in a battle.



Algerian Archer

The Algerian archer is armed with a bow and arrow. These units are effective when combined with infantry only. Archers will not shoot if the enemy is too close. They will fire incendiary arrows at buildings, fortifications and ships.

This unit is created in barracks.



Life:	30
Time:	25
Cost:	10 food, 2 wood
Shot:	150 arrow, 199 incendiary arrow

Algerian Archer (mercenary)

Algerian mercenary archers are infantrymen armed with bows and arrows. Archers will not shoot if the enemy is too close. They will fire incendiary arrows at buildings, fortifications and ships. The archers are effective in setting ships on fire.

You can create this unit in a diplomatic centre.



Life:	25
Time:	25
Cost:	12 gold
Shot:	28 arrow, 100 incendiary arrow

MUSKETEERS

These formed the basic and largest number of a regular army. Musketeers used no armour and were armed with fuse muskets as their main weapon. A musket was about 1.25 m (4 ft) long, about 7 kg (15 lb) in weight and 18 to 20 mm (about 3/4") calibre. Before firing, a musket was rested on a prop. A marksman could fire a fuse musket only once every two minutes. Before firing, a musketeers would have to pull a fuse out of his serpentine and hold it with his left hand. Then he rested the butt against the ground and filled the barrel with gunpowder from a tube. Next, he would flatten the gunpowder with a ramrod, cork it with a wad and put a bullet into the barrel. Then he took the musket in his hands and filled it with gunpowder from a sprinkler, closed the cover, blew away the leftovers, and opened the cover again. Next he would fix the fuse, aim and finally fire the musket. All these actions with a smouldering fuse were dangerous, since just a small spark could easily ignite the gunpowder or the soldier's uniform. A musketeer had a shoulder belt with 12 wooden tubes of gunpowder set in leather, a spare fuse, a powder flask and a powder sprinkler. A musket was quite a powerful weapon, capable of piercing thick metal plates from a distance of 50 steps. Along with a musket, the soldier was also armed with a sword. Musketeers of the Thirty Years' War used massive formations of 6 ranks. After each salvo, the rank would step back to reload their muskets.

As technologies improved, muskets became lighter. In 1624, the Swedish army was armed with muskets that needed no props. About 1648, a flintlock was invented. In 1671, a regiment of King's fusiliers in France was armed with flintlock muskets, and after 1692 the whole French army was equipped with this new weapon. Approximately at the same time, all of Europe was armed with similar muskets. A Swedish musket from 1692-1704 weighed 4.7-5.0 kg (10-11 lb) and had a 22 mm calibre. Its range of fire was about 225 m (740 ft). With the introduction of the flintlock and paper cartridge, the muskets' rate of

fire was improved significantly, up to 2 to 3 shots per minute. For the whole of the 17th century, musketeers remained very weak in hand-to-hand combat and could not fight back a cavalry attack without pikemen's support. However, at the end of the 17th century, the bayonet was introduced and turned a musket into a kind of pike, though not as good as the real thing. All these innovations contributed greatly to the musketeers' military power, so that they became a kind of all-purpose infantry, while pikemen gradually vanished from the armies. New musketeer square formations could withstand a cavalry charge. The formation depth was reduced from six ranks to three. The first rank fired in kneeling position, the second fired upright, and the third rank fired through in between the ranks of soldiers standing in front of them. Great importance was placed on making perfectly synchronized salvoes sound like a single shot. It was believed that simultaneous hits increased the demoralizing effect shots. Whole battalions or platoons were taught to shoot as one soldier. Soldiers were trained for strict combat procedures; a private had no right to decide by himself, he had only to obey orders. The infantry marched in time, with their officers to left and right. They fired salvoes when commanded to do so. With these tactics, a soldier's personality meant nothing, so even unreliable and ill-assorted elements were recruited. The value of each individual soldier had decreased in comparison to the previous period. A good rate of fire was often achieved with snap shooting up to 4 shots per minute. In the 18th century, musketeers had already become far cheaper and more numerous and were capable of completing virtually any tactical mission.

European Musketeer, 17th century (England)

A European musketeer of the 17th century is an infantryman armed with a musket. This unit can hit targets at a certain distance. Musketeers of the 17th century cannot shoot if the target is too close. This unit requires a long time to build.

You can create this musketeer in 17th century barracks.



Life:	50
Time:	400
Cost:	45 food, 10 iron, 6 gold
Shot:	9

Upgrades:

Attack:

<i>Barracks 17th century:</i>	Conduct a fencing drill 2 (+1) g150, f1900
<i>Barracks 17th century:</i>	Conduct a fencing drill 3 (+1) g300, f1000
<i>Barracks 17th century:</i>	Conduct a fencing drill 4 (+2) g700, f500
<i>Academy:</i>	Improve firearms: rifled barrel (+10%)
<i>Academy:</i>	Develop granular gunpowder (+15%)
<i>Academy:</i>	Research new sulphur rectification methods (+20%)
<i>Academy:</i>	Research new nitre rectification methods (+30%)

Defence:

<i>Barracks 17th century:</i>	Conduct a physical training 2 (+1) g50, f220, e100
<i>Barracks 17th century:</i>	Conduct a physical training 3 (+2) g140, f505, e200
<i>Barracks 17th century:</i>	Conduct a phys. training 4 (+3) g100, f3670, e350
<i>Barracks 17th century:</i>	Conduct a phys. training 5 (+1) g1720, f1000, e100
<i>Barracks 17th century:</i>	Conduct a phys. training 6 (+1) g1900, f2060, e400
<i>Barracks 17th century:</i>	Conduct a phys. training 7 (+1) g1150, f5900, e700

Rate of fire:

<i>Academy:</i>	Design wheel lock (+ 35%)
<i>Academy:</i>	Design paper cartridge and iron ramrod (+ 35%)

European Musketeer, 17th century (Fr., Pi., Pg., Pr., Sa., Sw., Ve., Sp.)



Life:	85
Time:	562
Cost:	40 food, 12 iron, 4 gold
Shot:	9
Defence:	1 (pike), 5 (sword), 9 (arrow), 5 (shot), 30 (cannonball), 255 (canister)

Musketeer, 17th century (Austria)



Life:	55
Time:	600
Cost:	50 food, 5 iron, 14 gold
Shot:	10
Defence:	1 (pike), 1 (sword), 1 (arrow), 2 (shot), 10 (cannonball), 215 (canister)

Musketeer, 17th century (Netherlands)

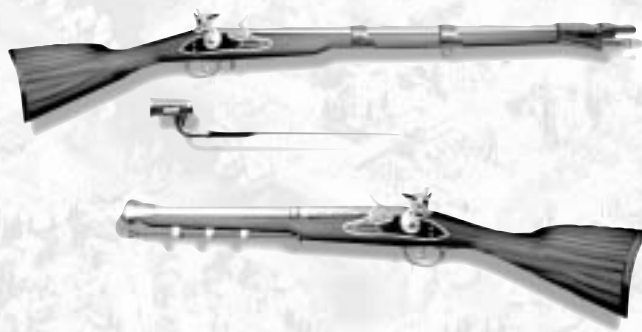


Life:	65
Time:	375
Cost:	50 food, 10 gold
Shot:	7

Musketeer, 17th century (Poland)



Life:	95
Time:	650
Cost:	48 food, 3 gold
Shot:	10



European Musketeer, 18th century (Austria)

A European musketeer of the 18th century is armed with a musket and a bayonet. This unit can hit targets at a certain distance and battle hand-to-hand. The creation cost of 18th century European musketeers is low after a particular upgrade is carried out in the academy. The unit is effective in hand-to-hand combat. You can create this musketeer in 18th century barracks.



Life:	100
Time:	150
Cost:	40 food, 45 iron, 45 gold
Shot:	12
Attack:	18 (pike)

Upgrades:

Attack:

<i>Barracks 18th century:</i>	Conduct a fencing drill 2 (+2) g800, f1000
<i>Barracks 18th century:</i>	Conduct a fencing drill 3 (+3) g800, f1500
<i>Barracks 18th century:</i>	Conduct a fencing drill 4 (+4) g800, f2000
<i>Barracks 18th century:</i>	Conduct a fencing drill 5 (+5) g800, f2500
<i>Barracks 18th century:</i>	Conduct a fencing drill 6 (+6) g800, f3000
<i>Barracks 18th century:</i>	Conduct a fencing drill 7 (+10) g800, f3500
<i>Academy:</i>	Improve firearms: rifled barrel (+10%)
<i>Academy:</i>	Develop granular gunpowder (+15%)
<i>Academy:</i>	Research new sulphur rectification methods (+20%)
<i>Academy:</i>	Research new nitre rectification methods (+30%)
<i>Academy:</i>	Design bayonet (+7 pike)
<i>Academy:</i>	Research new steel grades (+25% pike)
<i>Blacksmith:</i>	Forge bayonets and broadswords for infantry (+5 pike)

Defence:

<i>Barracks 18th century:</i>	Conduct a physical training 2 (+1) g350, f3706
<i>Barracks 18th century:</i>	Conduct a physical training 3 (+2) g1350, f11030
<i>Barracks 18th century:</i>	Conduct a physical training 4 (+3) g4000, f35706
<i>Barracks 18th century:</i>	Conduct a physical training 5 (+4) g4350, f36556
<i>Barracks 18th century:</i>	Conduct a physical training 6 (+5) g1350, f30060
<i>Barracks 18th century:</i>	Conduct a physical training 7 (+6) g1350, f37600

Rate of fire:

<i>Academy:</i>	Design wheel lock (+35%)
<i>Academy:</i>	Design paper cartridge and iron ramrod (+35%)

Creation cost:

<i>Academy:</i>	Design flintlock (-50%)
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European Musketeer, 18th century (En., Fr., Nl., Pi., Po., Pg., Pr., Ru., Sp., Sw., Ve., Sa.)



Life:	100
Time:	950
Cost:	40 food, 45 iron, 45 gold
Shot:	22

STRELETS

STRELETS

Strelets regiments constituted the basic force of the Russian army before the reforms introduced by Tsar Peter I. One might say it was the first Russian regular army. Strelets service was hereditary. Strelets were exempt from taxes, received a salary and could keep houses and learn a trade. The strelets history begins in 1550, when shooting units with pischals (a Russian type of fuse musket) were organized in 6 states (later called boards or regiments) with 500 soldiers each. They were situated in Moscow, in Vorobyov sloboga (the outskirts of the city). A regiment's officers comprised a head (colonel), a major, sotniks (lieutenants) and uryadniks (sergeants). The strelets strength was about 7,000 during the rule of John IV, while by the crowning of Theodore Ivanovich (John's son) in 1584, more than 20,000 soldiers were numbered among the streets regiments. These fighters were armed with heavy fuse muskets or samopals (a Russian type of flint musket), sabres and pole-axes that they also used as musket props. The heads (officers) could be armed with a sabre and a partisan. Sometimes strelets units wore light chain mail. Their equipment comprised a fur cap, a long outer caftan, a zipun (a broadcloth camisole), porty (broad trousers) and gloves. A brightly coloured outer caftan was belted with a sash. Strelets regiments were abolished in Moscow in 1711 and vanished from the provinces after 1716.

Strelets (Russia)

Strelets units are armed with muskets. They can hit targets at a certain distance and are efficient when combined with infantry only. Strelets cannot shoot if the target is too close. These units possess high attack parameters and require a long time to build.

These units can be created in strelets barracks.



Life:	85
Time:	468
Cost:	60 food, 15 iron, 5 gold
Shot:	11

Upgrades:

Attack:

<i>Barracks 18th century:</i>	Conduct a fencing drill 2 (+1) g100, f2000
<i>Barracks 18th century:</i>	Conduct a fencing drill 3 (+1) g300, f1000
<i>Barracks 18th century:</i>	Conduct a fencing drill 4 (+2) g700, f500
<i>Academy:</i>	Improve firearms: Rifled barrel +10%
<i>Academy:</i>	Develop granular gunpowder +15%
<i>Academy:</i>	Research new sulphur rectification methods (+20%)
<i>Academy:</i>	Research new nitre rectification methods (+30%)

Defence:

<i>Barracks 18th century:</i>	Conduct a physical training 2 (+1) g50, f170, e100
<i>Barracks 18th century:</i>	Conduct a physical training 3 (+2) g150, n405, e200
<i>Barracks 18th century:</i>	Conduct a phys. training 4 (+3) g100, n3570, e350
<i>Barracks 18th century:</i>	Conduct phys. training 5 (+1) g1350, n1556, e100
<i>Barracks 18th century:</i>	Conduct phys. training 6 (+1) g2050, n1060, e400
<i>Barracks 18th century:</i>	Conduct phys. training 7 (+1) g1350, n5700, e700

Rate of fire:

<i>Academy:</i>	Design wheel lock (+35%)
<i>Academy:</i>	Design paper cartridge and iron ramrod (+35%)

PANDURS

In addition to linear infantry fighting mainly in a tight formation, there was another type of light infantry not intended for major battles. Its mission was to wage guerrilla wars, fight in extended formations and snipe enemy officers. They set the standards for light infantry formed later in other countries.

Pandur (Austria)

A pandur is an infantryman armed with a musket. This unit can hit targets at a certain distance. Pandurs cannot shoot if the target is too close. This is one of the best shooting units. You can create pandurs in 18th century barracks.



Life:	85
Time:	300
Cost:	25 food, 5 iron
Shot:	18

Upgrades: See Strelets



HIGHLANDERS

In an age of transmigration, the territory known as Caledonia in Roman times was conquered by the Scots - one of the Celtic tribes that inhabited Ireland. In a fierce battle, they defeated the local tribe of Picts. In the 9th century, Scotland was united into a kingdom. By the end of the 11th century it had become strongly dependent on England. Their unusual uniform designed from a traditional national outfit distinguished Scottish detachments from the rest of the English army. Individual clans retained their original kilts. Their equipment and battle tactics were very similar to those of musketeers.

Highlander (England)

A highlander is armed with a musket, but has no bayonet. These units can hit targets at a certain distance. Highlanders will not shoot if the target is too close. They cost little to create.

You can create Highlanders in 18th century barracks.



Life:	100
Time:	250
Cost:	50 food, 7 iron
Shot:	17

Upgrades: See Strelets

CHASSEURS

In addition to linear infantry fighting mainly in a tight formation, the French also formed another type of force capable of rapid movement and long-range fire. This type of infantry was made up of snipers, chasseurs and the most enduring and strong men. Along with linear battle, these forces could wage guerrilla wars and man outposts.

Chasseur (France)

Chasseurs have muskets, but no bayonets. These units can hit targets at a certain distance. Chasseurs will not shoot if the target is too close. They cost little to create.

You can create chasseurs in 18th century barracks.



Life:	85
Time:	300
Cost:	58 food, 7 iron
Shot:	20

Upgrades: See Strelets



JANISSARIES

JANISSARIES

This force was the core of the Turkish army - the regular infantry created in 1330 by Sultan Urkhan. First they were made up of Christians taken from their families in their early childhood and converted to Moslems. Later, janissary service became hereditary. They constituted a kind of military caste and took an active part in palace revolutions. Janissaries were equipped with muskets, yataghans, daggers and sometimes pikes, but had no armour. Generally, janissaries were used for the same battle missions as European musketeers, i.e. they were considered all-purpose infantry. Janissaries also watched over the enormous Turkish army recruited from varied parts of the Ottoman Empire, which was often far from having a strong morale.

Janissary (Turkey)

Janissaries are armed with a musket. These units can hit targets at a certain distance. They are effective in combination with infantry only. Janissaries won't shoot if the target is too close. They possess high attack parameters and cost little to create.

You can create Janissaries in 18th century barracks.



Life:	55
Time:	400
Cost:	45 food, 3 iron
Shot:	12

SERDIUKS

A hetman's mercenaries were divided into cavalry and infantry regiments. Foot Cossacks were called serdiuks or ohochepehotnys (volunteer infantrymen). In rare instances they were mounted on horses to increase mobility. Serdiuks were armed with muskets and various cold steel weapons. Their tactics and skills were certainly no match for those of regular European musketeers. However, they were able to efficiently fight back Tatars and combat in the country. Serdiuks were usually dressed in their traditional valueumes.

Serdiuk (Ukraine)

A serdiuk is armed with a musket. This unit can hit targets at a certain distance. He is effective to use in combination with infantry only. He is one of the best shooters in the game. The serdiuk possesses a wide firing range.

You can create serdiuks in Cossack barracks.



Life:	85
Time:	600
Cost:	70 food, 15 iron, 3 gold
Shot:	10



GRENADIERS

GRENADIERS

These soldiers were trained to throw grenades. They were introduced in the 17th and early 18th century. They were definitely the elite, the best infantry available. The physically strongest and most stalwart people were recruited to join these forces. Their equipment comprised a musket with a bayonet, a sword and a few grenades. They could also handle a hand mortar. These mortars were used mainly for shelling enemy fortifications. While firing, grenadiers rested a mortar club against the ground or a tree trunk. Grenadier formations were much alike to musketeer formations - they fell in three files. When threatened by cavalry they formed a square. Their equipment was also similar to that of musketeers.

Grenadier (As, En, Fr, NI, Pg, Po, Pr, Ru, Sp, Sw, Ve)

Grenadiers are elite infantry units. A grenadier is armed with a musket, a bayonet and grenades. This unit can strike at its enemy from a distance. Grenadiers are highly efficient in square formations. They can demolish buildings, towers and fortifications with grenades.

You can create this unit in 18th century barracks.



Life:	100
Time:	200
Cost:	90 food, 85 gold
Shot:	12
Thrust:	22 (pike)
Grenade:	110

Upgrades:

Attack:

<i>Barracks 18th century:</i>	Conduct a fencing drill 2 (+ 2 pike) g800, f2000
<i>Barracks 18th century:</i>	Conduct a fencing drill 3 (+ 3 pike) g1800, f12000
<i>Barracks 18th century:</i>	Conduct a fencing drill 4 (+ 4 pike) g2800, f32000
<i>Barracks 18th century:</i>	Conduct a fencing drill 5 (+ 5 pike) g3800, f42000
<i>Barracks 18th century:</i>	Conduct a fencing drill 6 (+ 6 pike) g4800, f52000
<i>Barracks 18th century:</i>	Conduct a fencing drill 7 (+ 1500 grenade) g15800, f62000
<i>Academy:</i>	Improve firearms: Rifled barrel (+ 10%)
<i>Academy:</i>	Develop granular gunpowder (+ 15%)
<i>Academy:</i>	Research new sulphur rectification methods (+ 20%)
<i>Academy:</i>	Research new nitre rectification methods (+ 30%)
<i>Academy:</i>	Design bayonet (+ 7 pike)
<i>Academy:</i>	Research new steel grades (+ 25% pike)
<i>Blacksmith:</i>	Forge bayonets and broadswords (+ 5 pike)

Defence:

<i>Barracks 18th century:</i>	Conduct a physical training 2 (+ 1) g350, f3706
<i>Barracks 18th century:</i>	Conduct a physical training 3 (+ 2) g1350, f11030
<i>Barracks 18th century:</i>	Conduct a physical training 4 (+ 3) g4000, f35706
<i>Barracks 18th century:</i>	Conduct a physical training 5 (+ 4) g4350, f36556
<i>Barracks 18th century:</i>	Conduct a physical training 6 (+ 5) g1350, f30060
<i>Barracks 18th century:</i>	Conduct a physical training 7 (+ 7) g1350, f64000

Rate of fire:

<i>Academy:</i>	Design wheel lock (+ 35%)
<i>Academy:</i>	Design paper cartridge and iron ramrod (+ 35%)

Grenadier (mercenary)



Life:	24
Time:	50
Cost:	15 gold
Keeping cost:	5
Shot:	4
Thrust:	30 (pike)
Grenade:	110

Grenadier (Saxony)



Life:	90
Time:	100
Cost:	60 food, 100 gold
Shot:	15
Thrust:	25 (pike)
Grenade:	130



CAVALRY

LIGHT CAVALRY WITH COLD STEEL

MAMELUKES

In the early 13th century, the sultan's personal guard, known as the mamelukes, was put together from Turkish and Caucasian slaves in Egypt. In 1250 they overthrew the ruling Ejubide dynasty and enthroned their own. Mamelukes became a feudal military caste that ruled the country. They retained their position even after the Turks captured Egypt in the early 16th century. Mamelukes were an irregular cavalry. The best of the Arabian horsemen, they were brought up in a martial atmosphere from their very childhood and were trained to ride and wield all kinds of weapons.

Mameluke (Algeria)

A mameluke is a light cavalry unit armed with a lance. The unit is effective against infantry. This unit is quickly produced and costs little to create.

You can create this unit in a stable.



Life:	380
Time:	700
Cost:	75 food, 3 iron, 5 gold
Attack:	12 (pike)

Upgrades:

Attack:

Stable:	Conduct a fencing drill 2 (+2) g3000, f1000
Stable:	Conduct a fencing drill 3 (+3) g2000, f2000
Stable:	Conduct a fencing drill 4 (+4) g8000, f7100
Stable:	Conduct a fencing drill 5 (+1) g2000, f2250
Stable:	Conduct a fencing drill 6 (+1) g5000, f3030
Stable:	Conduct a fencing drill 7 (+1) g18000, f7000
Blacksmith:	Forge new broadswords, sabres and pike-heads (+5)

Defence:

Stable:	Conduct a riding drill 2 (+3) g135, f200, e3000
Stable:	Conduct a riding drill 3 (+4) g100, f2000, e5000
Stable:	Conduct a riding drill 4 (+5) g200, f44928, e10000
Stable:	Conduct a riding drill 5 (+2) g300, f44928, e4000
Stable:	Conduct a riding drill 6 (+2) g350, f44928, e20000
Stable:	Conduct a riding drill 7 (+2) g1000, f44928, e30000

Creation speed:

Blacksmith:	Forge harnesses for horses (+300% faster production of cavalry units)
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SPAKHS

Along with the janissaries, these troops formed the core of the Turkish army. Spakhs comprised a heavy feudal cavalry settled at the European border of the Turkish Empire. They were perfectly skilled in combat and riding, as well as in hand-to-hand fighting. Their entire life was devoted to soldiering. They constituted a kind of warrior caste which was, in a sense, comparable to European knighthood. Spakhs wore armour and wielded varied weapons.

Spakh (Turkey)

A spakh is a heavy cavalryman armed with a lance. He is effective against infantry. The unit is quick to create and possesses low attack and defence parameters.

You can create this unit in a stable.



Life:	340
Time:	650
Cost:	95 food, 5 wood
Attack:	10 (pike)

LIGHT RIDERS

The Polish light cavalry comprised Polish noblemen, Lithuanian Tatars, Moldavians, Valahs and Cossacks. It varied greatly in structure, weaponry and equipment. These warriors usually fought in extended formation and were armed with a sabre, pistols, a lance and sometimes a bow and a lasso. Light riders were the most effective troops for outflanking formations and raiding the enemy's rear. Polish authorities paid much attention to cavalry training and equipment - often to the prejudice of infantry though.

Light Riders (Poland)

A Polish light rider is a cavalryman armed with a sabre. He is effective against infantry. This unit is quick to create and possesses low attack parameters.

You can create a light rider in your stable.



Life:	280
Time:	800
Cost:	45 food, 2 iron, 1 gold
Attack:	8 (sword)



CROATS

Croats (not to be confused with the nation) constituted a light cavalry force intended for violent raids to the enemy's rear, reconnaissance, manning outposts and frontier service. The main features of these fighters were their speed and manoeuvrability. The riders were always in control of their horses and so were capable of performing various tactical manoeuvres on the battlefield. Naturally, they were inferior to heavy cavalry concerning attack power, but this failing was easily countervailed by their manoeuvres, ambushes and sudden raids on the rear or flanks. A Croat was usually equipped with a sabre, a pair of pistols and a short flint musket.

Croat (Austria)

A Croat is a light cavalryman armed with a sabre. He is effective for diversions. This unit takes a short time to build and can move very quickly. Croats are ineffective against infantry formations and heavy cavalry.

You can create Croats in a stable.



Life:	250
Time:	1750
Cost:	75 food, 5 iron, 2 gold
Attack:	9 (sword)



HUSSARS

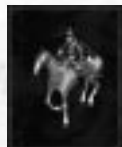
Hussars

Hussars constituted a light cavalry force used for bold raids to the enemy's rear, reconnaissance, manning outposts and frontier service. In the period of linear tactics, hussar squadrons took on a special significance. They escorted infantry squads and intercepted deserters. This way they helped maintain discipline and order in the infantry, which often consisted mainly of riffraff. Hussars were usually regarded as adventurous people. The main features of this force were its speed and manoeuvrability. They were excellent horsemen capable of performing numerous tactical moves in a battle. Naturally, they were inferior to heavy cavalry concerning attack power, but that was easily countervailed by their manoeuvres, ambushes and sudden charges to the rear or flanks. Hussars were armed with a sabre, a pair of pistols and a short flint musket or blunderbuss (for short-range buckshot fire). Their equipment had many traditional Hungarian features and comprised a dolman (a jacket embroidered with gold or silver cords), a pelisse (an outer jacket with fur worn on the left shoulder), chuckchirs (leather-cased trousers) or riding breeches, boots with tassels and a sabretache worn on the left side.

Hussar (As, En, Fr, NI, Pi, Po, Pg, Pr, Ru, Sa, Sp, Sw, Ve)

A hussar is a light cavalry unit which may be effectively used for diversions. Hussars are quickly created and highly manoeuvrable. They are not effective against cuirassiers.

Hussars can be created in stables.



Life:	250
Time:	950
Cost:	110 food, 3 iron, 5 gold
Attack:	11 (sword)

Upgrades: Attack:

Stable:	Conduct a fencing drill 2 (+ 1) g1800, e1000
Stable:	Conduct a fencing drill 3 (+ 2) g5800, e2000
Stable:	Conduct a fencing drill 4 (+ 3) n20200, e3000
Stable:	Conduct a fencing drill 5 (+ 2) n32000, e4000
Stable:	Conduct a fencing drill 6 (+ 3) n49200, e9500
Stable:	Conduct a fencing drill 7 (+ 4) n14000, e4000
Blacksmith:	Forge new broadswords, sabres and pike-heads (+ 5)

Defence:

Stable:	Conduct a riding drill 2 (+ 1) g1350, f1760
Stable:	Conduct a riding drill 3 (+ 2) g4350, f1900
Stable:	Conduct a riding drill 4 (+ 3) g8350, f1600
Stable:	Conduct a riding drill 5 (+ 2) g11350, f8000
Stable:	Conduct a riding drill 6 + 3 g21350, f2000
Stable:	Conduct a riding drill 7 (+ 4) g40150, f56000

Creation speed:

Blacksmith:	Forge harnesses for horses (+ 300% faster production of cavalry units)
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DON COSSACKS

These Cossacks were an irregular cavalry with an original structure and unique administration system. Their ranks were beefed up with fugitive serfs and militaries sent to defend the frontiers. The largest Cossack associations were formed at Dniepro (Zaporizhzhya Sich), Don and Yaik (river Ural). As the Russian monarchy grew stronger in the 19th century, Cossacks gained the status of a regular army. Their weapons and equipment were manifold, but mainly they were armed with a scimitar, pistols, a musket and a lance. A Cossack used no armour except for the occasional light chain mail, and wore a long caftan without buttons and a tall fur cap. Like the light cavalry, Cossacks attacked in an extended array. They were quick and manoeuvrable, successful in raids to the rear, good at outflanking manoeuvres and were often used for gaining new territories and performing frontier duties.

Don Cossack (Russia)

A Don Cossack is a light cavalryman armed with a pike. This unit is effective against infantry. It takes only a short time to build and its creation cost is low.

You can create this Cossack in a stable.



Life:	240
Time:	1100
Cost:	50 food
Attack:	12 (pike)

Upgrades: Attack:

<i>Stable:</i>	Conduct a fencing drill 2 (+1) g500, f2000
<i>Stable:</i>	Conduct a fencing drill 3 (+2) g800, f5000
<i>Stable:</i>	Conduct a fencing drill 4 (+3) g1200, f10000
<i>Stable:</i>	Conduct a fencing drill 5 (+1) g1300, f20000
<i>Stable:</i>	Conduct a fencing drill 6 (+2) g4000, f30000
<i>Stable:</i>	Conduct a fencing drill 7 (+3) g5000, f20000
<i>Blacksmith:</i>	Forge new broadswords, sabres and pike-heads (+5)

Defence:

<i>Stable:</i>	Conduct a riding drill 2 (+1) g1350, f2000
<i>Stable:</i>	Conduct a riding drill 3 (+1) g2100, f1500
<i>Stable:</i>	Conduct a riding drill 4 (+1) g3300, f5000
<i>Stable:</i>	Conduct a riding drill 5 (+1) g4400, f10500
<i>Stable:</i>	Conduct a riding drill 6 (+1) g5500, f12600
<i>Stable:</i>	Conduct a riding drill 7 (+9) g6000, f40000

Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+300% faster production of cavalry units)
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UKRAINIAN COSSACKS

Cossacks were the core of the Ukrainian army. They were formed at the time when Ukraine was under Polish rule. In the 17th and 18th centuries, the Ukrainian Cossacks comprised several divisions. First of all there was the hetman's army. Then there was the army of Zaporizhzhya (the Sich Cossacks), a number of regional Cossack regiments (in the regions of Sumy, Kharkiv, Ochtyr, Izyum and Ostrog), and regiments of the right-bank Ukraine (which was a part of Poland).

The hetman's army was made up mainly of the Register Cossack regiments of Kiev, Mirgorod, Priluki, Pereyasliv, Nizhyn, Hadyatch, Lubyen, Starodub and Chernihiv. There were also mercenary regiments. The strength of each regiment was different (from 400 to 700 units). Regiments were divided into hundreds commanded by a hundred master and the starshina (his staff included a yessaul, an obozny and a cornet). A hundred comprised several kurens with a kuren ataman in command. Cossacks were armed with various weapons - scimitars, muskets, pistols, bows, daggers, maces and six-blade maces. They used both oriental and West European weapons, but usually had no armour.

Sich Cossack (Ukraine)

A Sich Cossack is a light cavalryman armed with a sabre. This unit is effective for diversions. It is one of the fastest cavalrymen.

You can create Sich Cossacks in stables.



Life:	300
Time:	1100
Cost:	200 food, 5 iron, 10 gold
Attack:	12 (sword)

Upgrades:

Attack:

<i>Stable:</i>	Conduct a fencing drill 2 (+2) g3000, f1000
<i>Stable:</i>	Conduct a fencing drill 3 (+3) g2000, f2000
<i>Stable:</i>	Conduct a fencing drill 4 (+4) g8000, f7100
<i>Stable:</i>	Conduct a fencing drill 5 (+1) g2000, f2250
<i>Stable:</i>	Conduct a fencing drill 6 (+1) g5000, f3030
<i>Stable:</i>	Conduct a fencing drill 7 (+1) g18000, f7000
<i>Blacksmith:</i>	Forge new broadswords, sabres and pike-heads (+5)

Defence:

<i>Stable:</i>	Conduct a riding drill 2 (+3) g135, f200, e3000
<i>Stable:</i>	Conduct a riding drill 3 (+4) g100, f2000, e5000
<i>Stable:</i>	Conduct a riding drill 4 (+5) g200, f44928, e10000
<i>Stable:</i>	Conduct a riding drill 5 (+2) g300, f44928, e4000
<i>Stable:</i>	Conduct a riding drill 6 (+2) g350, f44928, e20000
<i>Stable:</i>	Conduct a riding drill 7 (+2) g1000, f44928, e30000

Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+300% faster production of cavalry units)
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Sich Cossack (mercenary)

A Sich Cossack (mercenary) is a light cavalryman armed with a sabre. This unit is effective for diversions. This is one of the fastest cavalrymen.

You can create this Sich Cossack in a diplomatic centre.



Life:	150
Time:	50
Cost:	50 gold
Keeping cost:	20
Attack:	8 (sword)

Register Cossack (Ukraine)

Register Cossack is a light cavalryman armed with a pike. This unit is effective against infantry. It takes a short time to build and is inexpensive to build.

You can create a Register Cossack in your stable.



Life:	300
Time:	700
Cost:	55 food, 2 wood
Attack:	13 (pike)

Upgrades:

Attack:

<i>Stable:</i>	Conduct a fencing drill 2 (+2) g3000, f1000
<i>Stable:</i>	Conduct a fencing drill 3 (+3) g2000, f2000
<i>Stable:</i>	Conduct a fencing drill 4 (+4) g2000, f2000

<i>Stable:</i>	Conduct a fencing drill 5 (+ 1) g2000, f2250
<i>Stable:</i>	Conduct a fencing drill 6 (+ 1) g5000, f3030
<i>Stable:</i>	Conduct a fencing drill 7 (+ 1) g18000, f7000
<i>Blacksmith:</i>	Forge new broadswords, sabres and pike-heads (+ 5)

Defence:

<i>Stable:</i>	Conduct a riding drill 2 (+ 3) g135, f200, e3000
<i>Stable:</i>	Conduct a riding drill 3 (+ 4) g100, f2000, e5000
<i>Stable:</i>	Conduct a riding drill 4 (+ 5) g200, f65000, e10000
<i>Stable:</i>	Conduct a riding drill 5 (+ 2) g300, f65000, e4000
<i>Stable:</i>	Conduct a riding drill 6 (+ 2) g350, f65000, e20000
<i>Stable:</i>	Conduct a riding drill 7 (+ 2) g1000, f65000, e20000

Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+ 300% faster production of cavalry units)
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Hetman (Ukraine)

A hetman is a cavalryman armed with a sabre. This unit is effective against infantry and cavalry alike. It possesses very high attack and defence parameters. A hetman is expensive to create and takes a long time to build. You can create a hetman in a stable.



Life:	450
Time:	900
Cost:	150 food, 175 gold
Keeping cost:	1,25
Attack:	300 (sword)

Upgrades:

Attack:

<i>Stable:</i>	Conduct a fencing drill 2 (+ 50) g18000, f7000
<i>Blacksmith:</i>	Forge new broadswords, sabres and pike-heads (+ 5)

Defence:

<i>Stable:</i>	Conduct a riding drill 2 (+ 20) g1000, f44948, e30000
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Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+ 300% faster production of cavalry units)
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HEAVY CAVALRY WITH COLD STEEL

HEAVY RIDERS

As a result of the development of military science, knighthood was replaced by cavalry. Individual fighters gave way to tactical squadrons made up of riders - heavy cavalrymen. Protected by heavy armour, they excelled in hand-to-hand combat. The number of armour plates they wore decreased, but the weight and thickness became greater. All these changes were intended to defend them against the rapidly developing firearms. Only a point-blank pistol shot or a musket shot from less than 50 steps away could pierce an armour. A sword or a sabre was virtually helpless against a plate armour, unless it happened to hit a joint. Cavalrymen were armed with quite expensive wheel lock pistols (2-6). In close combat they wielded swords, daggers, halberds and occasionally long lances (depending on tactics). A cavalryman was quite heavy - his armour weighed about 35 kg (77 lbs) and consisted of a steel helm, a cuirass, bracers and knee-length leg-guards. Riders wore jackboots. Their horses were strong but not very manoeuvrable.

A rider's attack was initiated at a slow pace. Only in close vicinity to an enemy cavalryman did their horses fall into a faster trot. Heavy cavalry tactics varied and depended mainly on the level of battle training. Well-trained cavalrymen - e.g. Austrian or Swedish riders (in Gustaf Adolf's army) - wielded cold steel weapons. Poorly trained riders charged an enemy with pistols.

Rider (Austria, England, France, Netherlands, Piemonte, Portugal, Prussia, Saxony, Spain)

A rider is a heavy cavalryman armed with a sword. He wears armour to protect him from bullets and splinters. This unit is effective against infantry and light cavalry.

Riders can be created in stables.



Life:	350
Time:	3000
Cost:	100 food, 25 iron
Attack:	12 (sword)
Defence:	1 (pike), 6 (sword), 1 (arrow), 3 (shot), 7 (cannonball), 200 (canister)

Upgrades:

Attack:

<i>Stable:</i>	Conduct a fencing drill 2 (+2) g100, f500
<i>Stable:</i>	Conduct a fencing drill 3 (+3) g220, f900
<i>Stable:</i>	Conduct a fencing drill 4 (+4) g280, f4400
<i>Stable:</i>	Conduct a fencing drill 5 (+1) g320, f2250
<i>Stable:</i>	Conduct a fencing drill 6 (+1) g600, f3030
<i>Stable:</i>	Conduct a fencing drill 7 (+1) g1800, f7000
<i>Blacksmith:</i>	Forge new broadswords, sabres and pike-heads (+5)

Defence:

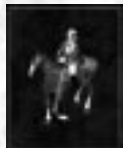
<i>Stable:</i>	Conduct a riding drill 2 (+3) g135, f200, e300
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<i>Stable:</i>	Conduct a riding drill 3 (+4) g100, f600, e400
<i>Stable:</i>	Conduct a riding drill 4 (+5) g200, f800, e560
<i>Stable:</i>	Conduct a riding drill 5 (+2) g300, f1600, e640
<i>Stable:</i>	Conduct a riding drill 6 (+2) g350, f3200, e300
<i>Stable:</i>	Conduct a riding drill 7 (+2) g1000, f16000, e5000
<i>Academy:</i>	Research improved steel grades for cuirasses (+2)
<i>Blacksmith:</i>	Forge new cuirasses (+2)

Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+300% faster production of cavalry units)
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Swedish Rider



Life:	350
Time:	2750
Cost:	150 food, 20 iron
Attack:	11 (sword)
Defence:	1 (pike), 2 (sword), 1 (arrow), 4 (shot), 3 (cannonball), 115 (canister)

Rider (Venice)



Life:	350
Time:	3000
Cost:	100 food, 25 iron
Attack:	12 (sword)
Defence:	1 (pike), 6 (sword), 1 (arrow), 3 (shot), 7 (cannonball), 200 (canister)



WINGED HUSSARS

Winged Hussars

"A mounted gentleman with a sword is worth a warlord," Polish noblemen boasted. Winged hussars in steel armour constituted the core of the Polish army. Infantry, being a significant part of other European armies, was merely an ancillary force in Poland. By June 1702 the king's army comprised 12 regiments of *cavalerja narodowa* (people's cavalry). There were 9 gonfalons (squadrons) in each regiment; each gonfalon comprised 150 to 600 soldiers. Colonels were the actual masters of the regiments - they maintained and equipped their soldiers. Each Polish tycoon took pride in his own heavy cavalry. A cavalryman was armed with a sabre, a pair of pistols, a short musket and a lance. He wore a steel helmet and armour plating. Special feathered wings protected his back from sabre blows. Winged hussars would often wear furs over their armour.

Winged Hussar (Poland)

A winged hussar is a heavy cavalry unit armed with a lance, effective against infantry and cavalry and useful for diversions. A winged hussar wears armour to protect him from bullets and splinters. The unit is highly manoeuvrable and has high attack and defence parameters. A winged hussar takes a long time to create.



Life:	235
Time:	2500
Cost:	150 food, 25 iron
Attack:	13 (pike)
Defence:	1 pike, 2 sword, 1 arrow, 1 shot, 7 cannonball, 175 canister

Upgrades:

Attack:

<i>Stable:</i>	Conduct a fencing drill 2 (+2) g200, f400
<i>Stable:</i>	Conduct a fencing drill 3 (+3) g120, f990
<i>Stable:</i>	Conduct a fencing drill 4 (+4) g380, f2400
<i>Stable:</i>	Conduct a fencing drill 5 (+1) g220, f4250
<i>Stable:</i>	Conduct a fencing drill 6 (+1) g200, f7030
<i>Stable:</i>	Conduct a fencing drill 7 (+1) g2200, f3000
<i>Blacksmith:</i>	Forge new broadswords, sabres and pike-heads (+5)

Defence:

<i>Stable:</i>	Conduct a riding drill 2 (+3) g35, f300, e100
<i>Stable:</i>	Conduct a riding drill 3 (+4) g200, f500, e600
<i>Stable:</i>	Conduct a riding drill 4 (+5) g300, f600, e260
<i>Stable:</i>	Conduct a riding drill 5 (+2) g200, f1800, e940
<i>Stable:</i>	Conduct a riding drill 6 (+2) g150, f2200, e700
<i>Stable:</i>	Conduct a riding drill 7 (+2) g1200, f17150, e4600
<i>Academy:</i>	Research improved steel grades for cuirasses (+2)
<i>Blacksmith:</i>	Forge new cuirasses (+2)

Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+300% faster production of cavalry units)
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CUIRRASSIERS

Cuirassiers

This unit represents the next stage up of heavy cavalry development in Europe. The armour worn by these riders was much lighter, resulting in higher speed and manoeuvrability. Much attention was paid to riding techniques. Cuirassiers could deliver powerful and deadly blows both to enemy cavalry and infantry in square formations. A cuirassier's equipment included a steel cuirass about 47 cm (18 1/2") high with a breast width of 44 cm (17") and weight of 8-9 kg (17-20 lbs). The cuirass protected a rider's breast and back from cold steel weapons and musket bullets (at a range of at least 50 steps). A pistol bullet could pierce the cuirass only if fired point-blank (from 2-3 steps away). Sometimes cuirassiers wore steel helms. A cuirassier was equipped with a suede collar, a uniform, leather trousers and jackboots. He was armed with a broadsword, a pair of pistols and a short cavalry flintlock musket or cavalry carbine. Cuirassiers attacked in tight array at a gallop from a distance of 1,800-700 steps. They used broadswords to break through enemy lines while their pistols remained a secondary weapon. General von Marwitz once wrote: "This force will break through whatever happens. Half of them may be shot down or become stuck in a ditch and hundreds will wring their necks. But they won't stop (not to mention turn back), for in all the swirl and turmoil of hundreds of horses spanking ahead in tight formation, even the best rider can control his horse no longer - they are all doomed to break through. Even if one of them can cope with his horse and manages to gain control - he'd better forget about stopping, or he'll be smitten by the rear and trampled down. So there's not a shadow of a doubt that, once such a charge is initiated, it will be either a breakthrough or a detachment will cease to exist." Cuirassiers were a privileged force and were exempt from many service burdens.

Cuirassier (Austria, England, France, Netherlands, Piemonte, Poland, Portugal, Russia, Saxony, Spain, Sweden, Venice)

A cuirassier is a heavy cavalry unit armed with a broadsword. He wears armour to protect him from bullets and splinters. Cuirassiers may be effectively used against infantry and cavalry. This unit possesses high attack and defence parameters. It is quick and expensive to create.

You can create this unit in a stable.



Life:	350
Time:	1750
Cost:	125 food, 20 iron
Attack:	15 (sword)
Defence:	1 (pike), 2 (sword), 5 (arrow), 5 (shot), 3 (cannonball), 175 (canister)

Upgrades:

Attack:

Stable:	Conduct a fencing drill 2 (+1) g600, f12000
Stable:	Conduct a fencing drill 3 (+1) g1300, f32000
Stable:	Conduct a fencing drill 4 (+1) g2200, f62000
Stable:	Conduct a fencing drill 5 (+1) g3150, f61000
Stable:	Conduct a fencing drill 6 (+1) g4100, f57055
Stable:	Conduct a fencing drill 7 (+8) g8020, f49050
Blacksmith:	Forge new broadswords, sabres and pike-heads (+5)

Defence:

<i>Stable:</i>	Conduct a riding drill 2 (+3) g350, f1760, e1000
<i>Stable:</i>	Conduct a riding drill 3 (+4) g750, f3000, e2000
<i>Stable:</i>	Conduct a riding drill 4 (+5) g300, f7600, e3030
<i>Stable:</i>	Conduct a riding drill 5 (+1) g6200, f8700, e100
<i>Stable:</i>	Conduct a riding drill 6 (+1) g2350, f8700, e5000
<i>Stable:</i>	Conduct a riding drill 7 (+7) g4444, f9700, e17060
<i>Academy:</i>	Research improved steel grades for cuirasses (+2)
<i>Blacksmith:</i>	Forge new cuirasses (+2)

Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+300% faster production of cavalry units)
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VITYAZES

These riders formed a feudal (boyar) cavalry in Russia. Knights were equipped with armour (coats of mail and steel plates) and armed with sabres, lances, halberds or maces and pistols. Their characteristic features were great fighting skills and morale. Traditionally, heavy infantry dominated the Russian army, therefore heavy cavalry was not too numerous. In terms of tactics and skills, it was comparable to Polish heavy cavalry. The Vityazes excelled in wielding cold steel weapons and horse riding.

Vityaz (Russia)

A vityaz is a heavy cavalry unit armed with a mace. He wears armour to protect him from bullets and splinters and may be effectively used against infantry and light cavalry. Vityazes have high attack and defence parameters. This unit takes a long time to build and is inexpensive to build.

You can build a vityaz in your stable.



Life:	380
Time:	3000
Cost:	130 food, 35 iron
Attack:	11 (sword)
Defence:	1 (pike), 2 (sword), 5 (arrow), 9 (shot), 3 (cannonball), 255 (canister)

CAVALRY GUARDS

Saxon cavalry guards consisted of the Garde du Corps, horse guards, a grand musketeer corps and a regiment of carbineer guards. The Garde du Corps - a regiment of heavy cavalry - consisted of headquarters staff and six squadrons (with two companies each). The first company consisted of 73 soldiers and the second of 71. The horse guards comprised a squadron of 142 units, with the Elector himself serving as captain. The grand musketeer corps comprised 164 soldiers. The carbineer guards regiment was similar to the Garde du Corps. They were equipped with a pair of pistols, a broadsword, a cavalry handgun and a cuirass. Carbineers were armed with carbines (with rifled barrels) instead of guns.

Cavalry Guard (Saxony)



Life:	380
Time:	1500
Cost:	150 food, 10 iron, 5 gold
Attack:	16 (sword)
Defence:	1 (pike), 5 (sword), 4 (arrow), 5 (shot), 7 (cannonball), 30 (canister)



SHOOTING CAVALRY UNITS

TATARS

The Ottoman Empire included enormous territories with various peoples who formed the majority of the Turkish army. These soldiers were neither a homogeneous group nor disciplined. They were armed with various, frequently obsolete weapons. Sultans also hired nomadic tribes living in the Crimea (Southern Ukraine). Tatars, like other similar units, had no standard uniform and dressed in traditional garments. They usually attacked in mounted arrays and were armed with bows, lances, scimitars, daggers, lassoes and occasionally with muskets and pistols. Chain mail or leather was used as an armour. Tactically, they fought in extended formations. Tatars were numerous but greatly inferior to the regular cavalry concerning battle skills. With their bows, which were effective at short ranges, they were able to fire 10 to 12 shots per minute and could cause great damage to an enemy.

Tatar (Turkey)

A Tatar is a cavalry unit armed with a bow. He can hit targets at a certain distance, but cannot shoot if the enemy is too close. Tatars can fire incendiary arrows to set buildings, fortifications and ships on fire. You can create this unit in a stable.



Life:	300
Time:	500
Cost:	80 food, 10 wood
Attack:	49 arrow, 140 incendiary arrow

Upgrades:
Creation speed:

Blacksmith: Forge harnesses for horses (4)

DRAGOONS

Their history begins with infantrymen mounted on horses. However, as this force was developed, more and more attention was paid to riding drills. This resulted in a force that could fight both in mounted and foot formation. They yielded to heavy cavalry in hand-to-hand fighting, but with sufficient training they could accomplish the same missions. Dragoons were armed with a musket (later a musket with a bayonet), a sabre or a broadsword and a pair of pistols. Dragoons had no armour. Their equipment was very much alike to that carried by musketeers, except for the fact that dragoons wore jackboots. In a foot array, they fell in 3 ranks like linear infantry. When mounted, they charged in a tight array like heavy cavalry. As the cavalry developed, dragoons were used less and less as infantry.

Dragoon, 17th century (As., En., Fr., Nl., Pi., Po., Pg., Pr., Sa., Sp., Sw., Ve.)

A dragoon of the 17th century is a cavalryman armed with a musket. This unit can hit targets at a certain distance. It cannot battle hand-to-hand. Dragoons of the 17th century possess a large range of fire. They have a low rate of fire and take a long time to create.

You can create this unit in a stable.



Life:	300
Time:	3500
Cost:	150 food, 10 iron, 25 gold
Shot:	11

Upgrades:

Attack:

<i>Stable:</i>	Conduct a practice shoot 2 (+2) g150, f500
<i>Stable:</i>	Conduct a practice shoot 3 (+2) g200, f700
<i>Stable:</i>	Conduct a practice shoot 4 (+3) g340, f900
<i>Stable:</i>	Conduct a practice shoot 5 (+1) g600, f1000
<i>Stable:</i>	Conduct a practice shoot 6 (+1) g800, f2000
<i>Stable:</i>	Conduct a practice shoot 7 (+3) g950, f1000
<i>Academy:</i>	Improve firearms: Rifled barrel (+10%)
<i>Academy:</i>	Develop granular gunpowder (+15%)
<i>Academy:</i>	Research new sulphur rectification methods (+20%)
<i>Academy:</i>	Research new nitre rectification methods (+30%)

Defence:

<i>Stable:</i>	Conduct a riding drill 2 (+1) g150, f900
<i>Stable:</i>	Conduct a riding drill 3 (+3) g1350, f6600
<i>Stable:</i>	Conduct a riding drill 4 (+3) g2250, f5000
<i>Stable:</i>	Conduct a riding drill 5 (+1) g1000, f3000
<i>Stable:</i>	Conduct a riding drill 6 (+1) g4350, f1000
<i>Stable:</i>	Conduct a riding drill 7 (+6) g8001, f6001

Rate of fire:

<i>Academy:</i>	Design wheel lock (+35%)
<i>Academy:</i>	Design paper cartridge and iron ramrod (+35%)

Creation speed:

<i>Blacksmith:</i>	Forge harnesses for horses (+300% faster production of cavalry units)
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Dragoon, 17th century (As, En, NI, Pi, Pg, Po, Pr, Ru, Sa, Sp, Sw, Ve)

A dragoon of the 17th century is a cavalryman armed with a musket. This unit can hit targets at a certain distance. It cannot battle hand-to-hand. Dragoons of the 17th century possess a large range of fire. They have a low rate of fire and take a long time to create.

You can create this unit in a stable.



Life:	320
Time:	3500
Cost:	70 food, 15 iron, 45 gold
Shot:	18

Upgrades:

Attack:

Stable:	Conduct a practice shoot 2 (+4) g200, f1000
Stable:	Conduct a practice shoot 3 (+4) g250, f10200
Stable:	Conduct a practice shoot 4 (+4) g200, f15200
Stable:	Conduct a practice shoot 5 (+5) g280, f19850
Stable:	Conduct a practice shoot 6 (+5) g1180, f32000
Stable:	Conduct a practice shoot 7 (+7) g980, f32000
Academy:	Improve firearms: rifled barrel (+10%)
Academy:	Develop granular gunpowder (+15%)
Academy:	Research new sulphur rectification methods (+20%)
Academy:	Research new nitre rectification methods (+30%)

Defence:

Stable:	Conduct a riding drill 2 (+1) g999, f250
Stable:	Conduct a riding drill 3 (+2) g1250, f1360
Stable:	Conduct a riding drill 4 (+3) g3150, f17600
Stable:	Conduct a riding drill 5 (+5) g9350, f15600
Stable:	Conduct a riding drill 6 (+1) g7350, f19600
Stable:	Conduct a riding drill 7 (+1) g10350, f25760

Rate of fire:

Academy:	Design wheel lock (+35%)
Academy:	Design paper cartridge and iron ramrod (+35%)

Creation speed:

Blacksmith:	Forge harnesses for horses (+300% faster production of cavalry units)
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Dragoon, 18th century (mercenary)



Life:	100
Time:	50
Cost:	100 gold
Keeping cost:	6
Shot:	19

French Dragoon, 18th century (France)



Life:	120
Time:	1800
Cost:	150 food, 45 iron, 45 gold
Shot:	7

KING'S MUSKETEERS

Special elite detachments were created for the personal protection of the King of France. One of these detachments comprised 2 companies of king's musketeers. These were noblemen only, professional fighters trained in soldiering from childhood. These musketeers excelled at fencing, accurate shooting and riding. Their arms and tactics were much like those of dragoons, but king's musketeers were better equipped - with expensive wheel lock muskets and the best cuirasses available. They were also armed with several pairs of pistols and a sword. The life of these detachments is described in great detail in novels by Dumas.

King's Musketeer (France)

The king's musketeer is an elite cavalry unit that can hit targets at a certain distance. It cannot battle hand-to-hand. King's musketeers possess very high attack parameters and take a long time to build.

You can create this unit in a stable.



Life:	320
Time:	7000
Cost:	200 food, 15 iron, 45 gold
Shot:	100

Upgrades:

Defence:

Stable:	Conduct a riding drill 2 (+1) g1350, f2000
Stable:	Conduct a riding drill 3 (+1) g2100, f1500
Stable:	Conduct a riding drill 4 (+1) g3300, f5000
Stable:	Conduct a riding drill 5 (+1) g4400, f10500
Stable:	Conduct a riding drill 6 (+1) g5500, f12600
Stable:	Conduct a riding drill 7 (+9) g6000, f40000

Creation speed:

Blacksmith:	Forge harnesses for horses (w4)
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ARTILLERY

CANNON

The introduction of artillery was truly revolutionary for fortifications and military science as a whole. Cannon were loaded with cannonballs for long range fire up to 1,500 m (5,000 ft) or with grapeshot for short range fire (150-500 m, or 500-1,600 ft). The navy also used incendiary cannonballs and two cannonballs or halves of a cannonball bound together with a chain to crash enemy rigs.

The terrain where artillery was positioned was of great importance. For instance, if an enemy was positioned on muddy soil or a swamp, cannonballs wouldn't recoil from the surface. Thus, the range of fire became shorter and the enemy's casualties grew less. The most favourable position for artillery was on hills, where the range of fire was much wider.

Cannon were lethal long-range weapons, but of little use when employed at short ranges or in hand-to-hand combat. Cannon were transported by horses harnessed to special carts known as limbers. A limber was also loaded with ammunition. The main load of the ammunition, however, was transported in a munitions wagon. A cannon's rate of fire was about one shot every two minutes. Initially, gunners had no specific uniform and were considered artisans rather than soldiers. However, as the regular army developed, they received a standard uniform similar to that of musketeers in the 18th century.

Cannon

A cannon is a powerful shooting unit. It is effective against enemy buildings, fortifications and ships. Cannon can fire cannonballs at medium and long ranges. In closer combat, they can hit cavalry and infantry with grapeshot. You will need gold to keep a cannon. If you run out of gold, your cannon will stop shooting. Unguarded cannon may be captured by the enemy. When shooting, a cannon requires a substantial amount of coal and iron.

You can build a cannon in your artillery depot.



Life:	5000
Time:	8000
Cost:	200 wood, 150 stone, 100 iron, 225 coal, 250 gold
Keeping cost:	125
Shot:	49 (cannonball)
Defence:	90



Upgrades: *Creation speed:*

<i>Artillery Depot:</i>	Develop new metalworking methods 2 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 3 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 4 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 5 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 6 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 7 (50%)

Cost:

<i>Artillery Depot:</i>	Foundry mechanization 2 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 3 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 4 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 5 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 6 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 7 (7%)

Fire accuracy:

<i>Academy:</i>	Research new sighting devices for artillery (+35%)
<i>Academy:</i>	Develop mathematics (+35%)

Range of fire:

<i>Academy:</i>	Research improved additions to gunpowder formula (+5%)
<i>Academy:</i>	Design new barrel types: unicorn, carronade (+10%)

Durability:

<i>Academy:</i>	Design more durable gun carriage: Gribovalle system (150%)
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HOWITZERS

The main advantage of a howitzer over a cannon is its lower weight for greater calibres. A howitzer's range of fire is shorter than that of a cannon, but the projectile trajectory is much higher and the bomb weight is much greater than that of a cannonball. Moreover, due to plunging fire, howitzers can shell enemy forces behind obstacles or irregularities in the landscape. In the past, a howitzer's fire accuracy was inferior to that of a cannon, but explosive projectiles (bombs) and its large calibre compensated for this drawback. Howitzers took over mainly in the 18th century and played a great role in battles of those times.

Howitzer 11

A howitzer is a siege unit with plunging fire. Howitzers are effective against fortifications and large infantry detachments. These units possess a low rate of fire and low shooting accuracy. You will require gold to maintain them. When you run out of gold, your howitzers will stop shooting. Unguarded howitzers can be captured by the enemy. When shooting, you will need a substantial amount of coal and iron.

You can build this unit in your artillery depot.



Life:	150
Time:	9370
Cost:	180 iron, 300 coal, 205 gold
Keeping cost:	12
Shot:	70 (grenade)

Upgrades:

Creation speed:

<i>Artillery Depot:</i>	Develop new metalworking methods 2 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 3 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 4 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 5 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 6 (50%)
<i>Artillery Depot:</i>	Develop new metalworking methods 7 (50%)

Cost:

<i>Artillery Depot:</i>	Foundry mechanization 2 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 3 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 4 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 5 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 6 (7%)
<i>Artillery Depot:</i>	Foundry mechanization 7 (7%)

Fire accuracy:

<i>Academy:</i>	Research new sighting devices for artillery (+ 35%)
<i>Academy:</i>	Develop mathematics (+ 35%)

Range of fire:

<i>Academy:</i>	Research improved additions to gunpowder formula (+ 5%)
<i>Academy:</i>	Design new barrel types: unicorn, carronade (+ 10%)

Durability:

<i>Academy:</i>	Design more durable gun carriage: Gribovalle system (150%)
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MORTARS

Mortars , short-barrelled cannon with plunging fire, were used mainly in fortress sieges. They were loaded with bombs or incendiary missiles and used to shell an enemy from special trenches. Before firing, the bomb fuse was ignited so that the bomb exploded the moment it reached the target. A mortar's range of fire was about 1,800-2,500 m (6,000-8,500 ft) on average. It took about 5-7 minutes to load and aim. Shooting accuracy was not very good, but the powerful explosion could cause great damage. Moreover, a mortar's plunging fire allowed it to reach targets behind walls or other obstacles.

Mortar

A mortar is a long range artillery unit. It fires with plunging fire over very long distances. Mortars are effective against towers and buildings. They are ineffective against infantry and cavalry. This unit possesses a high rate of fire and high shooting accuracy. You will require gold to keep it. When you run out of gold, your mortars will stop shooting. Unguarded mortars can be captured by the enemy. When shooting, you will need a substantial amount of coal and iron.

You can build this unit in your artillery depot.



Life:	100
Time:	800
Cost:	200 wood, 250 iron, 25 gold
Keeping cost:	12
Shot:	700 (grenade)
Defence:	250

MULTI-BARRELLED CANNON

To increase the rate of artillery fire, inventors attempted to multiply the number of barrels in an artillery system. Naturally this was not suitable for large-calibre cannon due to their excessive weight, but smaller cannon loaded with grapeshot profited from this development. This is how the predecessor of the modern machine-gun was developed. The new weapon was of limited use. It was effective against tight enemy infantry or cavalry formations. However, multi-barrelled cannons had only a short range of fire, were very heavy and extremely difficult to manufacture, therefore they were soon out of use.

Multi-Barrelled Cannon

A multi-barrelled cannon is an artillery unit firing canister shots at short distances. This cannon is effective against infantry. To keep it you will need gold. When you run out of gold, your cannons will stop shooting. Unguarded multi-barrelled cannon can be captured by the enemy. When shooting you will need a substantial amount of coal and iron.

You can build this unit in your artillery depot.



Life:	2000
Time:	1500
Cost:	150 iron, 450 gold
Keeping cost:	50
Shot:	500 (canister)

CIVILIAN VESSELS

BOATS

Boats were the smallest vessels used both for fishing and transporting small cargoes. Boats could also be used in military operations or for boarding enemy ships. Boats featured low displacement and seaworthiness. Oars or a sail were used to manoeuvre.

Boat

Boats are intended for fishing and cannot take part in military operations. You can build these units in a shipyard.



Life:	300
Time:	2500
Cost:	600 wood

Upgrades: Effectiveness:

Academy:	Design new tackle and fishing nets (+ 100%)
----------	---

Building Cost:

Academy:	Build new shipyards for fishing boats (85%)
----------	---

Creation speed:

Academy:	Train carpenters (w10)
----------	------------------------

FERRIES

In the unsteady times of the 17th and 18th centuries, buccaneers and privateers were the masters of the sea. Never-ending warfare and continual pirate menaces forced trade ships to add to their weaponry. On the other hand, any merchant could smuggle or buy a privateer's licence and start raiding others. Certainly, a merchant ship's armament was no match for a battleship and the speed of transport ships was lower because they had smaller crews, but in certain situations merchants could put up serious resistance. Merchant ships also transferred troops, food and ammunition, and were of great importance during colonial wars.

Ferries

Ferries are used to transport land units by water. A ferry can carry up to 80 units at a time.

You can build this unit in a shipyard.



Life:	62000
Time:	2000
Cost:	300 wood, 100 iron, 50 gold

Upgrades:
Creation speed:

<i>Academy:</i>	Train carpenters (w10)
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WARSHIPS

YACHTS

These were single-masted ships without a topmast. These ships were improved versions of small merchant vessels with low sea gauges. During the war between Holland and Spain, these ships were armed with cannon and proved their worth many times over. One of the first yachts, the "Neptune", was constructed for Prince Moritz towards the end of the 16th century. Its design greatly influenced further yacht constructions.

Yacht

A yacht is the smallest warship that possesses high manoeuvrability and high speed but low cannon firepower. Yachts require substantial quantities of coal and iron.

You can build this unit in a shipyard.



Life:	31000
Time:	3000
Cost:	900 wood, 150 iron, 200 coal, 450 gold
Keeping cost:	12
Shot:	30 (cannon)

Upgrades:
Creation speed:

<i>Academy:</i>	Train carpenters (w10)
-----------------	------------------------

Velocity:

<i>Academy:</i>	Design new rigging types
-----------------	--------------------------

Fire accuracy:

<i>Academy:</i>	Research new sighting devices for artillery (+35%)
-----------------	--

<i>Academy:</i>	Develop mathematics (+35%)
-----------------	----------------------------

Range of fire:

<i>Academy:</i>	Research improved additions to gunpowder formula (+5%)
-----------------	--

<i>Academy:</i>	Design new barrel types: unicorn, carronade (+10%)
-----------------	--



GALLEYS

These were oared vessels with auxiliary fore and aft sails allowing the ship to travel at great angles (up to 30°) to the wind. Galleys were most common in the Mediterranean and the Black Sea and on rivers. Galleys were not very seaworthy and relatively slow (about 7 knots). But they were very manoeuvrable and did not depend on the wind. A galley was usually armed with several powerful guns at the bow and small-bore cannon. Galleys were of different sizes. The most prevalent characteristics were as follows: length - 41.7-43.0 m (136-140 ft); width - 5.5-7.3 m (18-24 ft); hull depth - 1.8-2.7 m (6-9 ft); 20-24 thwarts (benches for oarsmen). A galley's weaponry comprised 3-6 twelve-pound cannon and 18-21 falconets. Hired workers, convicts or sometimes soldiers were used as oarsmen. In addition to oarsmen, galleys took on 24-40 sailors, 9-14 officers and about 150 soldiers.

Galley

A galley is a medium-sized warship. This ship carries two types of artillery on board: cannon and mortars. Cannon are effective for short-range fire and mortars are suitable for particularly long distances. Mortars are effective for enemy seaside buildings and fortifications. You will need gold to maintain this unit. If you are out of gold, your galleys will stop shooting. Large amounts of coal and iron are needed for shooting.

You can build this unit in a shipyard.



Life:	50000
Time:	3000
Cost:	9500 wood, 1000 iron, 1100 gold
Keeping cost:	187
Shot:	790 grenade, 30 cannon
Defence:	100

Upgrades:

Creation speed:

<i>Academy:</i>	Train carpenters (w10)
-----------------	------------------------

Velocity:

<i>Academy:</i>	Design new rigging types
-----------------	--------------------------

Fire accuracy:

<i>Academy:</i>	Research new sighting devices for artillery (+ 35%)
-----------------	---

<i>Academy:</i>	Develop mathematics (+ 35%)
-----------------	-----------------------------

Range of fire:

<i>Academy:</i>	Research improved additions to gunpowder formula (+ 5%)
-----------------	---

<i>Academy:</i>	Design new barrel types: unicorn, carronade (+ 10%)
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XEBECs

A xebec is the most famous type of Mediterranean ship. It was a 25-35 m (80-115 ft) long vessel with an advanced ram stem and a deck reaching far beyond the poop. The underbody was exceptionally sharp. North African pirates regarded xebecs as the fastest sailing vessels.

Xebecs were armed with 16-24 cannon and took on a crew of 300-450. They had 3 masts and sails for different wind forces. For instance, in favourable but weak wind, rectangular sails were hoisted on the foremast and mainmast. In cross winds, when these sails were ineffective, long Latin yards with fore and aft (trapeze-shaped) sails were set. In case of gale force winds, long yards were replaced by short ones with Latin (triangular) sails on all masts.

Xebec

A xebec is a medium-sized warship. It does not need gold to maintain. When shooting, large amounts of coal and iron are needed.

You can build this unit in a shipyard.



Life:	65000
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Time:	15000
-------	-------

Cost:	7000 wood, 400 iron, 1200 coal, 2200 gold
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Shot:	35 (cannon)
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Upgrades:

Creation speed:

<i>Minaret:</i>	Train carpenters (w10)
-----------------	------------------------

Velocity:

<i>Minaret:</i>	Design new rigging types
-----------------	--------------------------

Fire accuracy:

<i>Minaret:</i>	Research new sighting devices for artillery (+ 35%)
-----------------	---

<i>Minaret:</i>	Develop mathematics (+ 35%)
-----------------	-----------------------------

Range of fire:

<i>Minaret:</i>	Research improved additions to gunpowder formula (+ 5%)
-----------------	---

<i>Minaret:</i>	Design new barrel types: unicorn, carronade (+ 10%)
-----------------	---

FRIGATES

Frigates were ships of medium speed. Their armament was weaker than that of battleships but powerful enough to conduct warfare. Therefore, these ships served mainly as cruisers. The first English frigate was built by Robert Deadly at the end of the 16th century. Early in 18th century, frigates were armed with about forty-four 9-12 and several 18 pound cannon. Their displacement was about 710 tons. Later on, their calibre and displacement were increased. By the 1780s, frigates were built with a displacement of 946 tons with thirty-eight 18 pound cannon.

Frigate

A frigate is a medium-sized warship. It does not need financing. When shooting, large amounts of coal and iron are needed.

You can build this unit in a shipyard.



Life:	50000
Time:	15000
Cost:	5000 wood, 800 iron, 1000 coal, 1500 gold
Shot:	30 (cannon)
Keeping cost:	37

Upgrades:

Creation speed:

Academy:	Train carpenters (w10)
----------	------------------------

Velocity:

Academy:	Design new rigging types
----------	--------------------------

Fire accuracy:

Academy:	Research new sighting devices for artillery (+ 35%)
----------	---

Academy:	Develop mathematics (+ 35%)
----------	-----------------------------

Range of fire:

Academy:	Research improved additions to gunpowder formula (+ 5%)
----------	--

Academy:	Design new barrel types: unicorn, carronade (+ 10%)
----------	---

BATTLESHIPS

Battleships intended for conquering and domination at sea were the heart of the navy from the mid-17th century onwards. They featured the most powerful weapons and the highest degree of manoeuvrability.

European ships with rectangular rigging were unusually fast for sailing ships. Thanks to their high sides, these ships could withstand heavy weather. However, they were strongly dependent on wind. In time, their rigging was improved and their displacement increased. The improved vessels were armed with artillery placed at the sides. Before a battle, ships would form a line which crumbled in combat, turning the battle into a chaotic scramble. Artillery was used inefficiently and vessels often prevented each other from firing. Small ships packed full with

explosives and inflammables drifted down wind to their targets. Amazingly, some battles were actually won thanks to them.

By the mid-17th century, vessels were grouped in strict columns, which made them much more efficient. However, for a fleet to be really strong, the column had to consist of many similar vessels. Otherwise the enemy would always find a weak spot and breach the formation. This was how battleships appeared. Gunsmiths established standard calibre cannon in repeatable work and made it possible to rank vessels according to the number of cannon they carried. In 1653, the British Admiralty divided ships into six ranks: 1st - more than 90 cannon, 2nd - more than 80 cannon, 3rd - more than 50, 4th - more than 38, 5th - more than 18, and 6th - more than 6 cannon. This classification determined the number of decks and the size of a ship. The first three classes comprised battleships. A fine example of their features is given by the following specifications of the English battleship "Royal Sovereign", built in 1637 by Finneas Pett:

Battery deck length - 53 m (174 ft); keel length - 47.2 m (155 ft); displacement - 2,000 tons; width - 15.3 m (50 ft); hold depth - 6,1 m (20 ft); 30 cannon on the lower and the middle deck, 26 cannon on the upper deck, 14 under the forecannon and 12 under the poop, adding up to a total of 82 cannon.

The ship was ornate. Its sculptures were reproductions of sketches by famous painter Van Dyck. The front sculpture depicted the English King Edward mounted on a horse and trampling the seven lords - the enemies of the Albion. The vessel was a flagship of the British fleet and took part in many sea battles. Unfortunately, an absurd accident led to the ship's destruction. In 1696, the "Royal Sovereign" burned down in a fire caused by a fallen candle. The English used to say that the "Royal Sovereign" cost King Charles his head: In order to achieve his dream of a sea campaign, Charles raised taxes in his country and thus caused the downfall of his government and, ultimately, his own decapitation.

It was Cardinal Richelieu - a great political figure and military reformer - who created the French navy. In 1626, the battleship "Saint Louis" was built.

In Russia, Tsar Peter I created the battleship navy. Thanks to his great vessels, Russia managed to strengthen its hold on the sea and sea trade.

Battleship

A battleship is a first-class warship. It possesses a high rate of fire and very high firepower. Much gold is required to keep this unit. This ship spends little coal and iron. The unit's speed is slow.

You can build this unit in a shipyard.



Life:	655000
Time:	25000
Cost:	9000 wood, 900 iron, 9000 coal, 4500 gold
Keeping cost:	37,5
Shot:	30 (cannon)
Defence:	100

Upgrades:

Creation speed:

Academy:	Train carpenters (w10)
----------	------------------------

Velocity:

Academy:	Design new rigging types
----------	--------------------------

Fire accuracy:

<i>Academy:</i>	Research new sighting devices for artillery (+ 35%)
<i>Academy:</i>	Develop mathematics (+ 35%)

Range of fire:

<i>Academy:</i>	Research improved additions to gunpowder formula (+ 5%)
<i>Academy:</i>	Design new barrel types: unicorn, carronade (+ 10%)





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